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## Editorial

The journal Desh Vikas has completed the incessant journey of nearly four years by satiating intellectual needs of the readers, researchers, writers, and research scholars. It became possible due to the tireless effort of the Editor and learned board of Editor. The journal aims at disseminating current and emerging thought areas pertaining to education and interdisciplinary aspects. Now there is explosion of knowledge for which the journal accommodates with learning topics and updated data. The empirical studies and survey reports contain data collected both from primary and secondary sources. Some of the topics are demand driven and some are of innovative nature.

To quote a stimulating line of **Charles Mackay's** poem,

“The pen shall supersede the sword,  
And Right, not Might, shall be the lord.  
There is a good time coming, boys,  
A good time coming:  
Wait a little longer.”

Since pre- Independence era, the poets have awakened the people to fight against injustice operation and exploitation that created vibration in the thinking process of the ordinary people. The journal has boosted the palace of the new writers by sharpening their writing skill. A number of writers within a period of nearly four hours has been multiplied the number of writers for which this journal is proud of. The journal also maintains transparency in the acceptance of the papers but the test of plagiarism and once the writer or researcher to guard against this type of discrepancy. The editor has right to accept and return to any paper if any sort of overlapping is noticed. The journal has been approved by UGC on certain strength of the journal and the editor and the editorial board does not want to distort the image of journal. The researchers, writers, research scholars should cooperate us in this direction. We expect unstinted support of the consumers, writers and the well-wishers in future. In this issue we have accommodate 25 research papers which are rich taste and style.

We exerted our sincere efforts to publish this July – September issue on time with reflections of quality. It is expected that all the articles will appease the intellectual hunger of the readers and researchers at large. On this occasion, I thank all the editorial committee members, authors, readers and printers of Desh Vikas Journal for their continuous help and intellectual contribution to produce this issue successfully.

**Dr. M. Abraham**  
**Editor**

## CONTENTS

|                                                                                                                                                                     |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Role of University in Societal Development: Towards the Making of Knowledge Society - <b>Dr. Aditya Keshari Mishra</b>                                              | 01-18   |
| Awareness & Knowledge on HIV/AIDS among Unmarried Women aged 15-24 years in Karnataka and Odisha States of India - A Comparative study - <b>Dr. N. Ravichandran</b> | 19-30   |
| Social Conditions of the Child Labour – An Empirical Study in Eluru of Andhra Pradesh - <b>Jangam Rajendra Prasad &amp; Dr. Allu Gowri Sankar Rao</b>               | 31-42   |
| Building Infrastructural Facilities: A Critical Challenge before the Economy of India & Bihar - <b>Dr. R. P. Shrivastava</b>                                        | 43-50   |
| Cinema and the Environment: An Inquiry on Ecocritical Academia - <b>Uttam Kr Pegu</b>                                                                               | 51-60   |
| Self-Help Groups: A Path for Economic Sustainability of Rural Women - <b>Sweta Kumari</b>                                                                           | 61-68   |
| A Study of Banana Production in Tamil Nadu: An Overview - <b>T. Ravi and C. Gunasekaran</b>                                                                         | 69-73   |
| Strategies for Sustainable Rural Development in India - <b>Dr. K. Kavitha</b>                                                                                       | 74-78   |
| Tribal Women Health, with Reference to Kandhamal District - <b>Anupama Bhoi &amp; Manoj Kumar Behera</b>                                                            | 79-84   |
| Impact of Individualized Instruction on the Learners Suffering from Dyslexia and Dysgraphia - <b>Dr. Koda Tirumalamba &amp; Dr. Kartikeswar Behera</b>              | 85-92   |
| Teachers' Unions in Telangana State: A Historical Perspective - <b>Kunta Anjaneyulu</b>                                                                             | 93-102  |
| Women's Movements in India: A Review - <b>Dr. D. Rama Rao</b>                                                                                                       | 103-112 |
| Small Districts its impact on Local governments in Telangana state - <b>Dr. Avinash Raje</b>                                                                        | 113-122 |

|                                                                                                                                                              |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Drinking Water, Sanitation Facility and it's linkages with Diarrhea among Children under five years of Age: A Global Challenge<br>- <b>Shilpi Rai</b>        | 123-128 |
| Environmental Legislations on Water Bodies: A Case study of Chilika Lake, Odisha - <b>Dr. Sagarika Mishra</b>                                                | 129-146 |
| Access of Electronic Resources in Academic Libraries<br>- <b>Kamre Adellu</b>                                                                                | 147-154 |
| An Enquiry into the Status of Information and Communication Technology Infrastructure in India in the context of Knowledge-based Economy - <b>Swarita De</b> | 155-166 |
| Urban Regional Centers Growth in India - A Study in Telangana<br>- <b>Konda Edukondalu</b>                                                                   | 167-176 |
| Problem of Child Labour in India, a Blatant Violation of Human Rights - <b>Dr. Gayatri Kar</b>                                                               | 177-184 |
| Impact of Globalization on Higher Education in Telangana State<br>- <b>Gade Venkataiah</b>                                                                   | 185-194 |
| Changing Educational Aspirations of Youth Among Muslim Community in Karimnagar District of Telangana State<br>- <b>Khaja Nazimuddin</b>                      | 195-198 |
| Generation of Employment through Mgnrega: A Study in Kalahandi District of Odisha - <b>Seshadev Suna</b>                                                     | 199-212 |
| A Cultural Study of the Temples of Inscriptions and Temple Architecture of Kolanupaka - <b>Easarapu Saidulu</b>                                              | 213-224 |
| Higher Education in the Digital Age: An Indian Perspective<br>- <b>Dr. R.P. Shrivastava</b>                                                                  | 225-228 |
| Urban Poverty Alleviation Programmes in India - <b>Kommu Shekar</b>                                                                                          | 229-242 |
| Capacity of Providing 'Present Food Production Security' Among Indian States - <b>Saroj Kumar Yadav</b>                                                      | 243-250 |

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## Role of University in Societal Development: Towards the Making of Knowledge Society

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### ABSTRACT

*Universities deal with the universality of knowledge. Universities are concerned with human beings in all their manifestations – biological, mental, emotional, objective and subjective – and their human, social, economic, political and cultural institutions and interactions with each other; they are concerned and connected with the societal surrounding within which human being find themselves. University is defined as an institution through which a society assumes its own continuity by socializing the young in its own image. Society defined as the whole range of social relationships of people living in a certain geographic territory and having a feeling of belonging to the same kind of group is always shaped and reshaped by its system of education in general and university education in particular. Therefore, many scholars often observe that there is always a strong relationship between university and society. The divide between university and society is porous. The current article makes a systematic attempt in understanding the interlinking development functions of the university and society, which can be explained in five broad categories: human development, social development, economic development, political development, and cultural development. The article also makes a critical attempt in understanding the challenges encountered by the university-society interface. Finally, the article ends with an alternative framework i.e. 'Quadruple Helix' in innovation of knowledge that ultimately provides answer to the challenges encountered by university-society interface.*

**Keywords:** Knowledge Economy, Knowledge Society, Quadruple Helix, Triple Helix

### Introduction

The notion of university, a source of knowledge as well as producer of intelligentsias, is central to an all-round development of any human society.

The university has been serving and shaping society for a long period time. The term ‘university’ originates from the Latin word ‘universitas’: simply meaning ‘a whole’, thereby signifying that the role of universities is to pursue balanced knowledge about virtually everything. University is rightly considered as a developmental-institution in all human societies. An institution is a social arrangement that has not only a certain form and function but also certain legitimacy and meaning for its individual members; university as an institution is not an exception. The life of a university, if the metaphor be permitted, is in a significant sense the life of its engagement in teaching, research and extension activities. In short, the ultimate goal of the university is its role in the production and dissemination of knowledge in the society in which it exists.

University is defined as an institution through which a society assumes its own continuity by socializing the young in its own image. Society defined as the whole range of social relationships of people living in a certain geographic territory and having a feeling of belonging to the same kind of group is always shaped and reshaped by its system of education in general and university education in particular. Therefore, many scholars often observe that there is always a strong relationship between university and society. This observation is borne out of the fact that it is not possible to separate or draw any line of demarcation between the two concepts. This is because of the fact that what happens to the university undoubtedly affects the society, and whatever occurs in the society certainly influences or shapes the university in all its ramifications. Therefore the divide between university and society is porous.

The contemporary society is now more complex, more connected and even changing more rapidly. We live in an environment pressured by cycles of events, fleeting fashions, and uncertain futures. Social structures are changing, as are values and attitudes. Competition is growing, people are increasingly mobile and the global economic centre of gravity is changing at a speed not seen before. Governments have to address series of issues ranging from – social, economic, educational, political, environmental, health and nonetheless the cultural – that are global in scope and require a coordinated global response. Electronic communication is becoming pervasive and it is possible to know whatever happens almost anywhere in the world as soon as it happens. Information on any subject is available readily, in quantity and almost instantaneously, although only a portion of it is credible, expert or

official. Nation states are subject to competing centrifugal and centripetal forces based on complex political, economic, religious, geographic and historical factors compounded by social networking and other new technologies. Natural and man-made disasters are becoming more common and their consequences greater. Individuals everywhere feel under tremendous pressure. In nutshell, change is inevitable and is central to any human society.

In this context, the university as a micro-society plays a pivotal role in understanding, reflecting and proffering appositely 'patterns of principles, processes and practices' and 'innovation in knowledge' in softening contemporary complexity of issues and problems confronted by the individuals in the society. More appropriately, the universities have done this by performing educating an ever greater proportion of the population and broadening its perspectives; by performing research that creates new understanding, new technologies and the potential for action; and by providing as a store of knowledge and capabilities that society as a whole has been able to draw upon. With this epigrammatic conceptual background, the present article attempts to underscore the university-society interface and to throw light on the role of university in contemporary societal development. The article is based on four sections. The first section makes a modest attempt in understanding the university. The second section draws light on the interlinking development functions of university and society. The third section figures out the challenges, drivers and development of university-society interface. The fourth and final section concludes with certain concluding viewpoints.

### **Role of University in the Making of Knowledge Society**

The expansion of universities is one marked feature of the social life in the present age. Since the establishment, universities have been frequently undertaking essential functions of the society. University provides vocational education and training for the top professional, thus developing a direct long-term link to the economy and to the practical needs of society. Due to the ever-increasing sophistication of the economy, universities have been obliged to provide training for a growing number of professions required for the smooth functioning of society. Today's universities are largely responsible for educating business executives, engineers, architects, social workers, veterinarians and many other professionals. While contributing to *The Idea of University*, J H Newman (1852) mentions:

A University is a place ... whither students come from every quarter for every kind of knowledge; ... a place for the communication and circulation of thought, by means of personal intercourse. ... It is the place to which a thousand schools make contributions; in which the intellect may safely range and speculate. It is a place where inquiry is pushed forward, ... discoveries verified and perfected, and ... error exposed, by the collision of mind with mind, and knowledge with knowledge. ... Mutual education, in a large sense of the word, is one of the great and incessant occupations of human society. ... One generation forms another. ... We must consult the living man and listen to his living voice, ... by familiar intercourse ... to adjust together the claims and relations of their respective subjects of investigation. Thus is created a pure and clear atmosphere of thought, which the student also breathes.

The progress and prosperity of any society depends on the knowledge that it produces. The development of knowledge in the society is the fundamental mission of any university. Therefore production and reproduction of knowledge is considered as the universal character of the university in society. Thus university can be defined as a form of institution that engages in the process of production and reproduction of knowledge for the all-round development of the society. In the contemporary period, teaching, research, and generation of knowledge are considered as the central missions of the university. The goal is to educate people to work effectively in an increasingly technological world – that is, to provide the technical skills needed for a growing number of jobs and professions that require sophisticated knowledge and an education that instills the ability to think critically. In many countries, general education is also considered a key university goal. Teaching has been the core role since the beginning. Research is considered as another core mission of the universities. It has come to be the central value of top-tier universities in all countries, and academic rewards and institutional prestige for individual faculty members are bestowed largely on the basis of research productivity. Research is defined in different ways by various disciplines and can take many forms. Pure research – the discovery of new knowledge – is generally considered the gold standard in terms of recognition and prestige. Nobel prizes are won for pure research. Applied research – increasingly emphasized as universities seek to generate income from research output – applies scientific discoveries to problems, commercial products or related practical goals. Closely linked to the research, generation of knowledge is

another core mission of the university. The university constantly engages itself in producing knowledge on various dimensions of the society. It is often considered as the space where the knowledge is created and recreated. It is therefore regarded as the repository of the knowledge.

There are four major purposes of universities: inspiring and enabling individuals to develop their capabilities to the highest levels; increasing knowledge and understanding; serving the needs of the economy; and shaping a democratic and civilized society. The first purpose testifies to the university's commitment to the long-term personal development of the individual, in contrast with the focus on the short-term employment needs inevitably driving other forms of post-school education, such as corporate training programs. The second purpose links the twin activities of research and teaching in the development and dissemination of knowledge. The third expresses the economic value of this research and teaching, and the fourth emphasizes the cultural value to the society it serves. For the individual, therefore, universities bring together research and teaching, and a focus on long-term needs, to offer a clear competitive advantage over what the knowledge industry can provide.

As a knowledge producing institution in society, university deals with six major aspects (Altbach 2008). First, university is considered as the centre for the preservation and dissemination of knowledge in society. Even in the age of the internet, universities are repositories and organizers of knowledge. Academic libraries of the universities have traditionally been regarded as centres for preserving and organizing the cultural and intellectual heritage of a society. Libraries not only collect books and journals (the essential elements of knowledge), they also organize scholarly and scientific material of all kinds for effective use and preserve it for future generations. Even in the age of digital storage, libraries remain essential parts of universities and of the organization and preservation of knowledge (Baker 2001). Second, the universities are considered as the centres for production of intellectuals in the society. Universities almost everywhere have become key creative institutions. Many professors, in addition to their teaching and research, involve themselves in the intellectual life of society as commentators, experts or analysts. Third, certain universities in the society are also ranked as the international institutions. Academic institutions operate in a global environment and bring science and scholarship from around the world to a

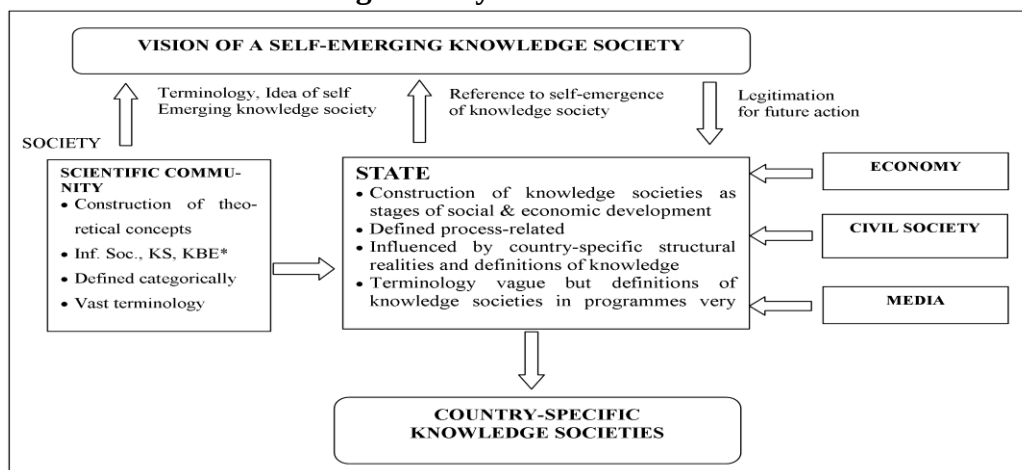
local community. Universities are the central links with the international scientific community. Fourth, universities are also regarded as the centre for access and equality in society. Universities provide education needed for most skilled occupations and professions in society. Access to university education is recognized as an important societal goal. Fifth, universities are also considered as the engines of economic development in society. From their origins, universities have stimulated local economies. Universities support knowledge- and technology-based industries that make use of the knowledge produced by the institutions – including skills of graduates and scientific innovations. Sixth and finally, universities are considered as the general educational institutions in the society. Universities have from their origins provided first-degree students with a broad general education in the physical, human and social sciences. The idea of general education, as it has evolved, is to provide students with a broad grounding in the basic knowledge they need in contemporary society and also with skills in logic, critical thinking and writing.

Because of the escalating increase of the number and quality of universities worldwide and their influence in the society, in the past twenty to thirty years, visionary terms which have been incorporated into public speeches, academic writings, and day-to-day journalism such as ‘knowledge society’, ‘information society’ and ‘knowledge-based economy’ announced a future in which social and economic development is increasingly based on knowledge. Governments worldwide adopted the general idea of knowledge society as well as the manifold terminology originating from the scientific community. While the creation of the concepts was mainly driven by the international scientific community, the construction of knowledge societies as stages of development has been pushed by national governments as well as actors from the private sector, the media and civil society groups (Diagram 1). The conceptual construction of the concept of knowledge society can be structured into a primary and a secondary phase, as argued in detail by Hornidge (2007). During the primary phase and inspired by developments in the information and communication technology sector, especially the internet, several scientists developed the idea of knowledge, information, as well as information and communication technologies becoming increasingly important for economic and social development and leading to a new stage of development, following the industrial society. The secondary phase of construction is characterized by the further development of the conceptual

ideas, increasing their empirical base, depth and the theorizing of these empirical data.

### Diagram 1

#### Framework of a Knowledge Society



Source: Hornidge, 2007

While the conceptual ideas leading to the concepts ‘knowledge society’ and ‘information society’ were mainly developed in the 1960s to 1980s, the conceptual basis of the ‘knowledge-based economy’ was formed mainly in the 1990s. American sociologist Robert E Lane is considered as the founder of the concept of ‘knowledge society’, assuming that knowledge, mainly referring to scientific, philosophical and cultural knowledge, replaces industrial organization and production as the major source of productivity. Lane (1966) states ‘the knowledgeable society is one in which, more than in other societies, its members: (a) inquire into the basis of their beliefs about man, nature, and society; (b) are guided (perhaps unconsciously) by objective standards of veridical truth, and, at the upper levels of education, follow scientific rules of evidence and inference in inquiry; (c) devote considerable resources to this inquiry and thus have a large store of knowledge; (d) collect, organize, and interpret their knowledge in a constant effort to extract further meaning from it for the purposes at hand; (e) employ this knowledge to illuminate (and perhaps modify) their values and goals as well as to advance them’.

#### University as an Engine of Societal Development

While deliberating an encompassing and interlinking view of higher education, M Castells (2009) emphatically highlighted the function of university in society:

We live in a global knowledge economy and in societies based on processing information, which is a primary university function. This implies that the quality, effectiveness and relevance of the university system will be directly related to the ability of people, society, institutions, to develop. In the context of a technological revolution and in the context of a revolution in communication, the university becomes a central actor of scientific and technological change, but also of other dimensions – of the capacity to train a labour force adequate to the new conditions of production and management. They also become the critical source of equalization of chances and democratization of society by making possible equal opportunities for people – it's not only a contribution to economic growth, it's a contribution to social equality or, at least, lesser inequality. Something else is their ability to develop new cultures; that is, to be the source of cultural renewal and cultural innovation which is linked to the new forms of living in which we are entering. Universities also have been dramatically affected by technological change itself – being an institution that processes information, its information and communication technologies are affecting deeply the functioning and the culture of the university, sometimes without full knowledge of what's happening and without controlling these processes. Yet, in spite of all these challenges, all these possibilities, all these opportunities for the university system, in many, many cases universities continue to be corporatist and bureaucratic, defending their own interests – particularly in terms of the professors – and extremely rigid in their functioning in terms of their administration.

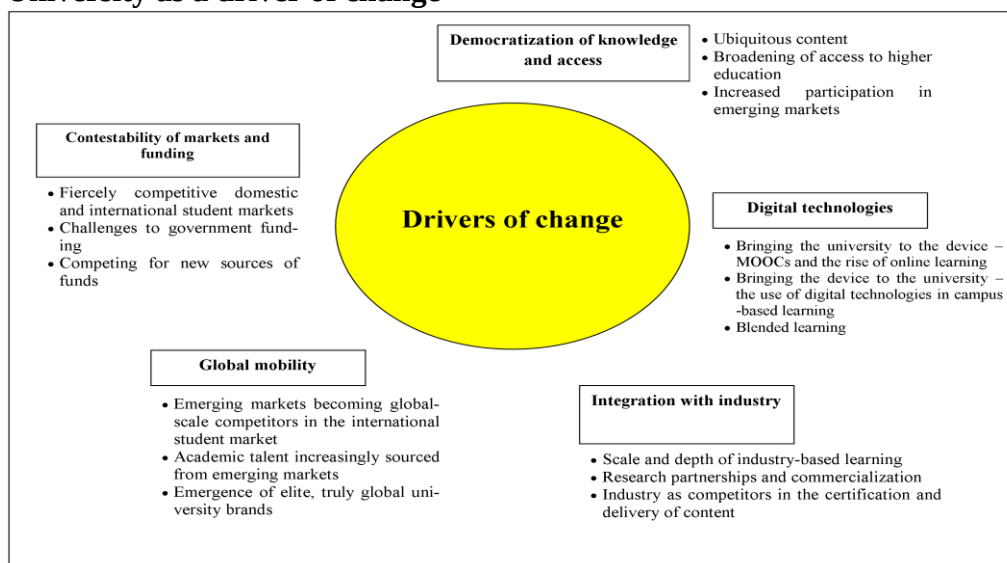
Castells is referring here to the core functions of the university. Echoing the works of many great thinkers on the ideas underlying the university including Alexander von Humboldt, Cardinal Newman and, more recently, Clark Kerr, Manuel Castells (2001) emphasizes that universities cannot be single-purpose institutions, but rather must be pluralistic in the sense of combining various functions. Manuel Castells (2001) posits that there are four major functions that the university discharges, which are applicable to all societies. First, Castells notes that universities have historically played a major role as ideological apparatuses, expressing the ideological struggles present in all societies. Second, they have always been mechanisms of selection and socialization of dominant elites. Third, the generation of knowledge, often seen as their most important function, is actually - according to Castells – a relatively minor one, with functions of scientific research often assumed by specialized national institutes (in Europe and many developing countries) or

within in-house laboratories of private firms (for example, Japan). Fourth, the most traditional - and today the most frequently emphasized – function of universities is the training of a skilled labour force (what Castells calls the ‘professional university’).

Ernst and Young in *University of the Future* (2012) envisages university as the drivers of five major changes especially in the spheres of (i) democratization of knowledge and access; (ii) digital technologies; (iii) integration with industry; (iv) global mobility; and (v) contestability (Diagram 2). Universities have become mass institutions in modern societies, at least in the highly developed countries, though this is less true of developing countries and newly industrializing countries. Hinrich Seidel (1991) mentions five main functions which a society expects its institutions of higher education to fulfill, though others could no doubt be added. First, they provide education and training within a structure which combines research and teaching. Second, they provide professional training. Third, they are research institutions, responsible for carrying out research in a broad range of disciplines, including the increasing amount of interdisciplinary work, and linked to this, for training a constant supply of qualified people for all fields of employment. Fourth, they have a part to play in regional development and also in developing international contacts. Fifth, they have a social function in fostering the intellectual and social development of society.

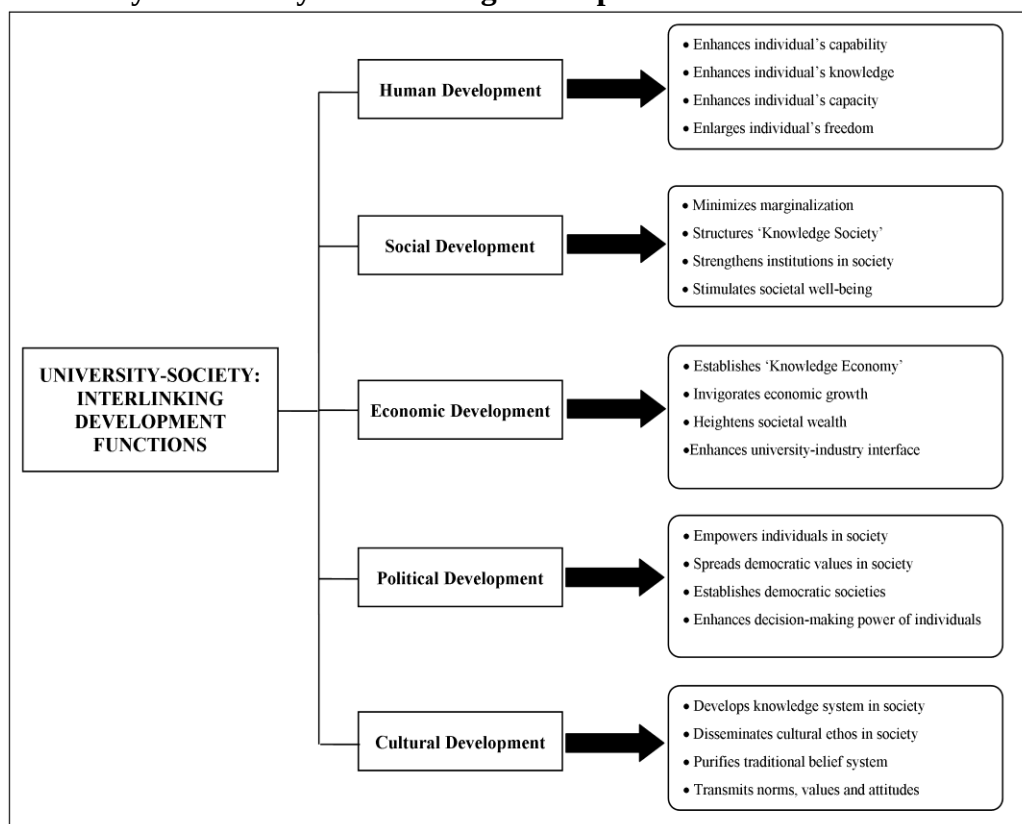
## Diagram 2

### University as a driver of change



Source: Ernst and Young, 2012

In more prosaic terms, the interlinking functions of the university and society can be discussed under five major headings: (a) repository of the knowledge of mankind (universities must act as ‘knowledge vaults’, maintaining and securing crucial knowledge for present and future generations); (b) generation of new knowledge (to undertake the activity that we call research); (c) transferring knowledge to the next generation (i.e. what we call education); (d) transferring knowledge to society (i.e. what we call dissemination); Based on the abovementioned theoretical viewpoints, the interlinking functions of the university and society can be subsumed under five broad categories: human development, social development, economic development, political development, and cultural development (Diagram 3).

**Diagram 3****University and Society: Interlinking Development Functions****Human Development**

Human resource is considered as a key aspect of any society. The development of society depends on the development of such human resource.

Universities used to play an invaluable role in the development of this human resource both in developed and underdeveloped or developing countries. In development dialogue, the development of this human resource is other wisely known as human development or development of human capital. Universities have a critical role to play in the development of human capital of the individuals in the society. Human development is defined as the process of enlarging people's freedoms and opportunities and improving their well-being.

Human development is about the real freedom ordinary people have to decide who to be, what to do, and how to live. Human capital refers to the skills, knowledge, and experience possessed by an individual or population, viewed in terms of their value or cost to an organization or country. University as a form of institution at the societal level plays a pivotal role in the learning process of such individual(s) in society; thus, university is considered as a critical component of human development worldwide. It provides not only the high-level skills necessary for every labor market but also the training essential for teachers, doctors, nurses, civil servants, engineers, humanists, entrepreneurs, scientists, social scientists, and a myriad of other personnel. It is these trained individuals who develop the capacity and analytical skills that drive local economies, support civil society, teach children, lead effective governments, and make important decisions which affect entire societies.

Much of the benefit of university accrues to individual in society. Universities perform vital functions both as generators of new knowledge through their cutting-edge research activities and as trainers of highly qualified labour. University can bring significant benefits to individual, not only through higher employment opportunities and income but also via enhanced skills, improved social status and access to networks. Precisely speaking, university facilitates individuals to receive advanced knowledge; creates a pool of highly talented individuals that attains a critical size and becomes a key societal resource; and ultimately makes a man an 'employable man' leading to minimize poverty and unemployment among individuals in society.

### **Social Development**

University provides a key role in the process of all round development of the society. A pre-condition of social development can be conceived in terms of the provision of educational opportunities for disadvantaged or marginalized sections of the society: the schedule caste, schedule tribe, women and other religious minority groups of the society. The objective is to include these

disadvantaged sections of the society in the process of mainstream development. That apart, the regional dimension is considered as one important aspect of the generally neglected treatment of the social role of the university. University-society partnership must be initiated, which will certainly enhance development in societal literacy, healthcare and wellbeing.

Although universities have been in existence for centuries as the foundation of education and the development of human sustainability, a key question lies with specific reference to the university social responsibility. Internationalization, student access and mobility, decrease in public expenditure, diversification and commercialization of higher education, and the impact of information and communication technologies are having an increasing impact on the delivery of quality education as well as on the notions of autonomy, academic freedom, its changing focus and responsibilities towards society (Vasilescu et. al. 2010). University generates, develops and disseminates knowledge and learning, expands human knowledge through quality research and education for the nation and for humanity.

University also strengthens betterment of locality, society and mankind through raising, strengthening and transforming community and national potential; providing services to community through community engagement and outreach, economic and national development, preservation and enhancement of national heritage in arts, religion and culture, socioeconomic building that increases and achieves sustainable development and negotiating competitiveness of country in the world community and ensuring the well-being, welfare, justice, security and sovereignty of the country and the world by upholding human values in realizing peace. It develops local human resources, nurture creative and entrepreneurial leaders with quality and virtue in a society of learning and wisdom through accessible knowledge acquisition, in a variety of dimensions, formats and platforms as well as wealth creation, nation-building and universal human advancement.

### **Economic Development**

University's roles in generating economic development are embraced by the practitioners of contemporary development discourse. There is a recent growing of discussion that demonstrates and advocates for the increasing role of the university in economic growth in any given society. It is often argued that universities in developing countries apart from being repositories of

knowledge normally represent the largest potential of research capabilities. In addition to their traditional roles they must, as far as possible, utilize these capabilities to assist with the socioeconomic development of the society in which they are embedded. They must at times take the initiative, provide leadership and act as an agent of transformation.

Universities are the traditional repositories of knowledge. They are best positioned to create and disseminate knowledge. The contemporary development discourse treats this process of generation of knowledge as the key element of economic growth. It is this knowledge generated mainly by the emerging technologies that have given rise to knowledge societies and a new engine of economic growth called knowledge economy. Knowledge economy refers to the manner in which various high technology businesses, especially computer software, telecommunications and virtual services as well as educational and research institutions can contribute to society's economy. In other words, knowledge economy is one in which the generation and exploitation of knowledge play the predominant part in the creation of wealth.

The last three decades have been characterized by an internationally increasing competitive environment, a so-called 'massification' of higher education and an economy more and more driven by knowledge – once the preserve of the university. This has resulted in the blurring of the boundaries of the once distinct institutional spheres, the university and the industry, and the emergence of a triple helix of academic-industry-government relations. An unmediated role between science and the economy is a new feature of this triple helix.

### **Political Development**

The role of the university in political development is the subject of much discussion in contemporary society. It is recognized as a key to deliver the knowledge requirements for political development including the development of democratic ethos and human rights in society. Attention and interest in the role of the university in political development has increased because of continuing concern that universities address problems caused by certain internal and external changes that have affected the political and social-economic order in contemporary society. The political role of the university might be very important after the moment when people, networks and ideas formed in the 'protected space' of the university spread into the wider society

and provide the human resources to fill new political leadership roles in society and its institution. The potential function of the university might be understood in the context of the development of the local communities. Many people are proposing a more pluralistic view of relevant knowledge and are concerned about the fate of the majority of the poor individuals of the community as they are always exploited by the minority of rich individuals (often considered as elites). As a result, the enormous scale of human struggle with poverty, exploitation, enslavement, disease, drought, famine, civil war, political authoritarianism, and decades of weakening structural adjustment programs provides obvious ground for social engagement by universities that represent resources of infrastructure, knowledge, information, expertise, agency, and activism, no matter how meager or impoverished they themselves might be. The university performs this task by innovating innovative ideas, which will certainly empower the weaker sections and allow them to take part in the decision-making process at the grassroots level.

Moreover, universities are called upon to confiscate the opportunity to build a foundation of civic and democratic values and skills that may inspire social cohesion and purpose and enable future leaders to overcome racial and ethnic tensions, dogmatism and religious extremism. The political role of the university also strongly proffers the creation and sustenance of state and civil institutions; the selection and socialization of political and social elites. In nutshell, the university should involve itself in the process of political reformation, transformation and revolution with a view to develop and sustain democratic institutions in the society.

### **Cultural Development**

The cultural function of the university affirms the production and dissemination of ideas, exerting influence upon and providing critique on these dimensions. University is also seen as cultivating and inculcating social and moral values among individuals in society. As such, the university plays an integral role in cultural transformation or preservation. The ideas of social capital, civic community and civil society that engage with government and other structures in a constructive manner so as to facilitate their functioning in the society are largely shaped by the system of knowledge as developed by the university in a particular society. Another possibility is the role of university in cultivating democratic values or international or global citizenship. The

common claim between these arguments is that university should create socially responsible and aware graduates capable of leading a society or community towards prosperity and success. Universities often exert an important symbolic influence i.e. providing opportunities for the celebration of national traditions. They can also serve as a socializing influence on elites to reinforce national values and loyalties. Universities in certain countries have had an important role in providing a repository for national sentiments during long periods of foreign dominance. The preservation of a national language and the influences which universities can play in this regard can also be noted in this respect.

Historically universities have played a role in the dichotomy between two cultural orders: 'official culture, preserved in art galleries, museums and university courses, demands cultivated tastes and a formally imparted knowledge. It demands moments of attention that are separated from the run of daily life. Popular culture, meanwhile, mobilizes the tactile, the incidental, the transitory, the expendable, the visceral' (Chatterton 2000). However universities now face a new set of circumstances which is changing their cultural relationship with the society because of the global metamorphic processes such as liberalization, privatization and globalization by which they are not increasingly connected to the nonlocal and translocal cultural systems. In this context, the university needs to develop new forms of knowledge systems in order to understand the interrelation between the global and local cultures as well as the hybrid culture.

### **University and Societal Development: Triple Helix to Quadruple Helix**

The contemporary university systems are largely influenced by what is happening in the wider society – and increasingly in the wider world – than they are direct causes of social change that ultimately affect the university-society interface. In other words, the university-society interface is affected by certain local and global processes. The local processes are to a large extent intermingled within wider global processes, sometimes in relation to them, often reinforced by them. Curriculum design, employability, widening participation, accreditation, competition, quality teaching, quality research, collaboration, funding, technology adoption, plagiarism, accountability and governance are considered as some of the key local processes that drive the university-society interface at local level.

On the other hand, there are six global processes that appear to be driving or at least underpinning the university-society interface. These are: globalization; democratization; the rise of 'supra-statism' and the associated growth of modeling on a regional and worldwide scale; the increased economic importance of knowledge, at least in the more advanced economies, in securing national comparative advantage; liberalization (the introduction of markets, competition and choice); and, finally, the growth of formal, transparent, and often juridical regulatory systems, both nationally and internationally. These local and global processes have brought about series of dialogues and deliberation among practitioners relating to the impermeable role of university in the production of knowledge in particular and the development of university-society interface in general. These processes have also greatly influenced the structure of knowledge innovation. In this context, the Quadruple Helix of innovation of knowledge would certainly provide an answer.

The Quadruple Helix is considered as the revised version of the Triple Helix. The Triple Helix model of knowledge, developed by Henry Etzkowitz and Loet Leydesdorff (2000), stresses three helices that intertwine and generate a national innovation system: academia/universities, industry, and state/government. In extension of the Triple Helix model, Elias G. Carayannis and David F.J. Campbell (2009) suggest a Quadruple Helix model. Quadruple Helix, in this context, means to add to the above stated helices a fourth helix that they identify twofold, as the media-based and culture-based public as well as the civil society. This should emphasize that a broader understanding of knowledge production and innovation application requires that also the public becomes more integrated into advanced innovation systems. Thus the Quadruple Helix of knowledge innovation is strongly based on 'university-industry-government-(civil) society' relations.

### **Towards Concluding Remarks**

Universities are multifaceted institutions in all societies. They are especially important to the knowledge economies of the 21st century, but their roles extend far beyond this. Universities are quintessential public-good institutions; they are an essential underpinning of intellectual life in all societies, and especially in developing countries. They are key international links for science, scholarship, culture and ideas. Understanding the complex roles of universities is a first step towards providing the needed support – not only appropriate public funding but also academic freedom and autonomy. Too

often, the government and the public see universities merely as economic engines and training grounds for key personnel. Universities play an important role in economic development, but this is only part of their broader mission.

Universities have been forced to give up part of their essential role as centres for intellectual and cultural life and as social analysts and critics. At the same time, universities are linked as never before to the practical needs of society as dictated by governments (for public institutions) and by the market (for both public and private institutions). At the beginning of the 21st century, the pendulum has swung way too far towards the government and the market, at the expense of the traditional autonomy of academe. Society would be better served by a more balanced academic environment in which universities could be more attuned to the broader public interest and to the traditional values of academic autonomy and independence. Universities serve many purposes in contemporary society and they deserve support, not only for their direct economic role. Societies that ignore the manifold purposes and roles of universities will be much weaker. Universities are engines of the knowledge economy, but they serve the humanistic and cultural goals of society and of individuals. Due to the tremendous pressure placed on higher education institutions to cope with increased societal demands in a context of inadequate resources, universities have become mainly reactive institutions that deal with new responsibilities as best they can. They can be creative only in ways that permit them to respond to external pressures. In much of the world, universities are part of increasingly competitive societies. In this context, the quadruple helix i.e. university-industry-government-(civil) society relations would certainly provide a practical answer in tackling the pressing challenges on higher education and society in general and university and society in particular.

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## **Awareness & Knowledge on HIV/AIDS among Unmarried Women aged 15-24 years in Karnataka and Odisha States of India - A Comparative study**

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### **ABSTRACT**

*Acquired Immune Deficiency Syndrome (AIDS) is the final and most serious stage of HIV disease, which caused severe damage to the immune system. Human Immunodeficiency Virus (HIV) causes AIDS. The virus attacks the immune system and leaves the body vulnerable to a variety of life-threatening infections and cancers. The virus can be transmitted through a) sexual contact, b) through blood and c) from mother to child. India has a huge population (1.2 Billion) and 2.1 million people are living with HIV. It is important to create awareness among the women particularly in young age group on safe sex and to reduce the chance of acquiring or spreading HIV and other sexually transmitted diseases. Unmarried women in the age group of 15-24 are the most vulnerable groups whose tastes and preferences, attitude and behaviors always involve certain amount of risk.*

*The study involves comparison of awareness, knowledge and misconception of unmarried women in the age group of 15-24 years of Karnataka and Odisha states. The HIV/AIDS epidemic has also challenged traditional cultural boundaries. The information included awareness, knowledge, misconception and Family Life Education. Karnataka and Odisha states in India were having different parameters have compared and analyzed in this study. It is of general opinion that female are found to be more vulnerable to infect HIV/AIDS than males, because they have a lack of awareness than the male. Education is the main source of awareness and knowledge which is lacking in both rural and urban areas of Odisha. It is observed that there is better correlation between education and awareness level in the state of Karnataka than Odisha.*

**Keywords:** AIDS, HIV, Women, misconception, unmarried, awareness, Family Life Education, misconception & Knowledge

**Introduction**

Acquired Immune Deficiency Syndrome (AIDS) is the final and most serious stage of HIV disease, which caused severe damage to the immune system. Human Immunodeficiency Virus (HIV) causes AIDS. The virus attacks the immune system and leaves the body vulnerable to a variety of life-threatening infections and cancers. The virus can be transmitted through a) sexual contact, b) through blood and c) from mother to child. India has a huge population (1.2 Billion) and 5.2 million people living with HIV. The HIV epidemic in India is driven by Heterosexual, Sex workers, Men sex with Men (MSM), injecting drugs, transgender, Migrant workers and truck drivers. Increasing awareness among the general population and key affected groups about HIV prevention is a central focus of India. Over 35% of all reported AIDS cases in the country occur among those in the age group of 15-24 years indicating that young people are not only at high risk of contracting HIV infection but already constitute a significant percentage of people living with HIV/AIDS. (India resolves to defeat HIV/AIDS, New Delhi: National AIDS control organization, Ministry of Health and family welfare 2005). HIV has spread beyond the “at risk” groups to the general population and from urban to rural areas.

**Awareness of RTI/STI and HIV/AIDS**

One of the important components of the Reproductive and Child Health (RCH) programme is to lead a healthy sexual life without any fear of contracting disease. RCH programmes focus much emphasis on promoting and encouraging healthy sexual behavior through Information, Education and Communication (IEC) activities. HIV/AIDS finds its victims in both rich and poor countries, but the hardest hit countries are between the developing and underdeveloped nations. Two decades into the epidemic and there is still no vaccine and no “cure” for AIDS (Vinod K.Sharma, 2003). The HIV/AIDS epidemic has also challenged traditional cultural boundaries. Approximately 5.2 million people are living with HIV/AIDS in India today. In the absence of curative and preventive therapy, even after more than two decades of clinical detection of the HIV/AIDS virus that causes AIDS, creating people awareness and knowledge regarding HIV/AIDS is the only cost effecting strategy of primary prevention especially in the developing countries like India (World Bank 1997). It is found that, due to lack of knowledge and awareness about RTI/STIs and HIV/AIDS women are not in the position even to share the problem with their family members.

**Review of Literature**

UNAIDS and Indian non-governmental organizations have expressed concern over the increasing incidence of HIV infections in four previously low-prevalence states that could potentially create a pandemic like situation because anti-AIDS efforts are not focused on those states. Odisha is one among the state. According to the Union and state governments six so-called “High Prevalence” states Karnataka is among the one. HIV and AIDS transmitted mainly through unprotected sex in the south and injecting drug use in the north-east of the country. As many as 111 districts are considered as high prevalence areas with HIV prevalence more than 1% in antenatal women and/or more than 5 percent in high risk behavior groups.

The problem seems to stem from the fact that HIV is often sexually transmitted, or is transmitted via drug use. Young sex workers constitute one of the most vulnerable groups for HIV infection and transmission. Of the estimated two million women involved in sex work in India, 25-30 percent is minors. HIV surveillance of 2005 reveals that around 18.0 percent of female sex workers infected with HIV. Over the years there are growing evidences that with increasing number of targeted interventions in different sub population level of knowledge about STI/HIV transmission is increasing, at the same time its misconceptions of HIV/AIDS have been increased. In the past two decades good number of studies were carried out on Reproductive health, Reproductive morbidity including STD, RTI and HIV/AIDS, Men women with some RTI s are at a greater risk of acquiring and transmitting HIV infection. There is a need to strengthen the RTI/STI control programme particularly in tribal areas. Sexually Transmitted Infection (STI) is an increasing concern among young people. In India it is estimated that 2.3 million people are currently living with HIV/AIDS.

Youth aged between 15-24 years are the fastest growing segment in the newly infected population. 91 percent of men and 88 percent of women between the ages of 15-24 years heard of HIV/AIDS. Out of which 45 percent men 28 percent women had comprehensive knowledge of HIV/AIDS (IIPS and Population Council 2010). As such, STDs form an enormous public health burden and responsible for a large number of undocumented complications. Keeping these factors in mind governments of many developed and developing countries are trying to control STDs. Therefore, managing STDs and altering the behaviour that lead to it are the essential elements of any HIV

/AIDS prevention and control programme (Olasode, 2007). In one of the study conducted by NACO in 2002 states that STD and HIV infection are no longer restricted to the high risk groups, but have spilled over to affect the general population as well.

United Nations (2005) reveals that pre-marital sex appears to be increasing among youth and HIV/AIDS is the first cause of mortality of youth in the world. Adolescents are more vulnerable than adults to unplanned pregnancies, sexually transmitted diseases and HIV/AIDS. It has been observed that when adolescents become sexually active, they tend to have multiple partners and use condoms and other contraceptives inconsistently (Ashford 2001).

### **Objective of the Study**

1. Assess the level of awareness about STI and HIV/AIDS by unmarried women aged between 15-24 years in the states of Karnataka and Odisha
2. Assess the level of knowledge about STI and HIV/AIDS by unmarried women aged between 15-24 years in the states of Karnataka and Odisha
3. To assess the level of misconception about HIV/AIDS among the young unmarried women aged between 15-24 years in the states of Karnataka and Odisha
4. To assess the knowledge of Family Life Education (FLE).

### **Methodology**

The awareness and understanding level of the unmarried women aged between 15 and 24 of Karnataka & Odisha states were considered for the study. The information included awareness, knowledge, misconception and Family Life Education. The study samples were drawn from District Level Household Survey-3 (DLHS-III). The field work of DLHS-3 was carried out during December 2007-December 2008. A multistage stratified systematic sampling design was adopted for DLHS-III. Several questions were asked to unmarried women aged between 15 and 24 years and first time in DLHS-III, awareness, knowledge of RTI/STI and HIV/AIDS by source of information collected from unmarried women of this age group.

According to Census India 2001 54% of the women population in the age group of 15-24 were unmarried. Karnataka and Odisha states in India were having different parameters have compared and analyzed in this study.

**Table 1**  
**Total No of unmarried women as state wise in the age group of 15-24**

| Karnataka                |       |       |       | Orissa                    |       |       |
|--------------------------|-------|-------|-------|---------------------------|-------|-------|
| Number of villages (965) |       |       |       | Number of villages (1298) |       |       |
| Unmarried women          | Total | Rural | Urban | Total                     | Rural | Urban |
| 15-24 Years of age       | 6452  | 4343  | 2109  | 7257                      | 6233  | 1024  |

The above table represents that the number of villages in Karnataka and Odisha were 965 and 1298 respectively. The total number of unmarried women of 15-24 years in the study area as 6452 in Karnataka with 4343 rural residents and 2109 urban residents respectively. Comparatively the total number of unmarried women in this age group in Odisha is 7257 out of which 6233 was from rural and 1024 belongs to urban population.

**Table 2**  
**Indicator**

| Karnataka                     |       |       |       | Orissa |       |       |
|-------------------------------|-------|-------|-------|--------|-------|-------|
| Unmarried women               | Total | Rural | Urban | Total  | Rural | Urban |
| Non-literate                  | 0.1   | 0.1   | 0.1   | 14.0   | 15.6  | 3.7   |
| 10 or more years of schooling | 53.7  | 47.6  | 66.3  | 29.7   | 25.3  | 56.2  |

Non literate of unmarried women in Odisha is comparatively high as 14.0 percent when compare to Karnataka's non literate women of 0.1 percent. Odisha's non literate rural and urban percentage indicates 15.6 and 3.7 respectively. However in total 10 or more years of schooling education shows high in rural with 47.6 which is high when compare to 25.3 percentage of Odisha's rural population. Overall the schooling level of the unmarried women in Karnataka shows 53.7 percent which is fairly better than Odisha's 29.7 percent.

**Table 3**  
**Awareness of RTI/STI & HIV/AIDS**

| Karnataka                             |       |       |       | Orissa |       |       |
|---------------------------------------|-------|-------|-------|--------|-------|-------|
| Unmarried women                       | Total | Rural | Urban | Total  | Rural | Urban |
| Who have heard of RTI/STI             | 42.8  | 42.2  | 44.2  | 19.2   | 18.4  | 23.8  |
| Who have heard of HIV/AIDS            | 92.1  | 90.9  | 94.7  | 68.6   | 67.0  | 78.4  |
| Place for testing HIV/AIDS            | 80.2  | 78.3  | 84.1  | 54.7   | 54.3  | 66.4  |
| Underwent test for detecting HIV/AIDS | 8.2   | 8.1   | 8.4   | 0.4    | 0.3   | 0.9   |

The above table indicates that awareness level of RTI/STI of unmarried women in Karnataka shows 42.8 percent which is better when compare to Odisha with 19.2 percent. The awareness level in Karnataka state in urban and

rural unmarried women is more or less equal. In Odisha, urban women awareness level is better than rural unmarried women in the study area and the overall percentage is less than Karnataka. Awareness of HIV/AIDS among unmarried women in Karnataka is 92.1 percent which is remarkable and this level is 68.6 percent in Orissa which is also not poor. It is very significant that in Karnataka, rural unmarried women awareness level shows 90.9 percent which is more than 3/4<sup>th</sup> of the rural women population. When compare to Karnataka rural women, the Odisha rural women who have heard of HIV/AIDS is 67.0 percent which is comparatively less. Since urban unmarried women in both states shows better awareness level due to better education facility. Place for testing of HIV/AIDS knowledge among unmarried women in Odisha is comparatively lower as 54.7 percent when compare to Karnataka state of 80.2 percent. In both states rural and urban level shows better awareness level, however Karnataka has better percentage in terms of both rural and urban. In Odisha state urban women have reasonably better awareness, but less than Karnataka.

Regarding underwent test for detecting HIV/AIDS, 8.1 percent of Karnataka women have underwent test and unmarried women in Odisha state underwent test found less than one percent which seems to be less awareness of test. It was observed from the above table, that Karnataka unmarried women were having better awareness on RTI/STI & HIV/AIDS than Odisha in both urban and rural areas of the state.

**Table 4**  
**Awareness of Contraceptive methods**

| Karnataka                                         |       |       |       | Orissa |       |       |
|---------------------------------------------------|-------|-------|-------|--------|-------|-------|
| Unmarried women                                   | Total | Rural | Urban | Total  | Rural | Urban |
| Women knows about condom                          | 53.3  | 50.7  | 58.5  | 68.9   | 66.5  | 83.4  |
| Know about pills                                  | 72.8  | 71.6  | 75.1  | 80.7   | 79.5  | 88.3  |
| Emergency contraceptive pills                     | 45.2  | 43.2  | 49.4  | 25.8   | 24.0  | 37.1  |
| Whoever discussed about contraception with anyone | 21.8  | 20.6  | 24.1  | 20.4   | 20.0  | 22.9  |

The awareness of contraceptive methods among the unmarried women who knows about condom found to be high as 68.9 percent in Odisha with urban and rural statistics shows 83.4 and 66.5 percent respectively whereas unmarried women knows about condom in Karnataka is 53.3 percent with rural and urban awareness level indicates 50.7 & 58.5 percent respectively. It

appears that condom awareness level among Odisha unmarried women is fairly better than Karnataka unmarried women. In Karnataka 72.8 percent unmarried women know about pills and 45.2 percent were aware of emergency contraceptive pills. However the awareness level of Odisha's unmarried women shows 80.7 and 25.8 percent respectively. Odisha women having about the knowledge of pills was slightly higher than Karnataka women. Generally Pills awareness among urban unmarried women population not a surprising factor whereas this awareness level is a surprising in rural unmarried women population in Odisha as 79.5 percent. The emergency contraceptive pill awareness among the unmarried women in rural area of Karnataka indicates in the table as 43.2 percent.

Whoever discussed about contraception with anyone is almost same and there was no big change in both the states and indicates as 21.8 and 20.4.

**Table 5**  
**Knowledge of HIV/AIDS by sources**

| Unmarried women              | Karnataka    | Orissa       |
|------------------------------|--------------|--------------|
| Number of Women              | 6452         | 7257         |
| Ever heard of HIV/AIDS       | 5944 (92.1%) | 4978 (68.6%) |
| <b>Source of Information</b> |              |              |
| Radio                        | 39.9         | 30.9         |
| Television                   | 75.1         | 80.3         |
| Cinema                       | 26.2         | 4.6          |
| Print Media                  | 51.6         | 31.0         |
| Health Personnel             | 25.2         | 7.3          |
| Adult Education programme    | 1.5          | 0.5          |

It is from the above table that unmarried women ever heard of HIV/AIDS shows very high in Karnataka as 92.1 and Odisha as 68.6 percent respectively. According to source of information Television dominates in both the states as 75.1 percent in Karnataka and 80.3 percent in Odisha followed by print media with 51.6 percent in Karnataka and 31.0 percent in Odisha. Radio is one of the major sources of information in both states as 39.9 and 30.9 percent respectively. The role of cinema and health personnel was dominating in the state of Karnataka as 26.2 and 25.2 whereas the same source of information in Odisha indicates very less percent. Adult education programme found to be the least source of information in both the states. Undoubtedly television creates wide range of source of knowledge in HIV/AIDS by sources. It covers most of the rural population and especially in Odisha it takes the unmarried women to the greater heights as one of the source of information. Print media

is also the one of the major source to create knowledge among the unmarried women. Cinema and health personnel in Odisha are not helping to create knowledge of HIV/AIDS as a source of information. Generally cinema is the one of the attracting source of information to create knowledge to the rural unmarried women. Implementation of any other modern methods will be useful to create the knowledge of the HIV/AIDS.

**Table 6**  
**Knowledge of HIV Transmission/AIDS**

| Unmarried women                                    | Karnataka | Orissa |
|----------------------------------------------------|-----------|--------|
| Number of Women                                    | 6452      | 7257   |
| Ever heard of HIV/AIDS                             | 5944      | 4978   |
| Unsafe sex with Homo sex                           | 14.5      | 6.0    |
| Unsafe sex with persons who have many sex partners | 75.2      | 72.2   |
| Unsafe sex with sex workers                        | 29.9      | 17.8   |
| Unprotected sex with HIV/AIDS infected person      | 35.7      | 20.6   |
| Infected mother to child                           | 40.2      | 25.6   |
| Blood Transfusion                                  | 49.6      | 44.7   |
| Others                                             | 59.7      | 32.7   |

As for the knowledge of HIV transmission, unmarried women have knowledge in both the states and especially unsafe sex with persons who have many sex partners having knowledge level stands as 75.2 and 72.2 percent respectively in the states of Karnataka and Odisha. Blood transfusion is one of the important causes for HIV transmission.

This knowledge among the unmarried women in both states fairly better, but it is less than fifty percent in Odisha as 44.7 percent. Unmarried women in Karnataka have better knowledge level as 35.7 percent than Odisha women knowledge of 20.6 percent on unprotect sex with HIV/AIDS infected person. Knowledge of HIV transmission on other mode 59.7 percent in Karnataka and in Odisha the respondent level shows as 32.7 percent. Infected mother to child transmission knowledge observed from the table as 40.2 and 25.6 percent in the states of Karnataka and Odisha respectively.

Knowledge of HIV transmission through unsafe sex with homosexuals among unmarried women in Karnataka with 14.5 percent and the respondent's knowledge level in Odisha recorded as 6.0 percent. Unsafe with sex workers knowledge level reasonably better among Karnataka respondents as 29.9 percent where as the knowledge level among Odisha respondents stand as 17.8 percent.

**Table 7**  
**Knowledge about How to avoid or reduce the chances of infecting HIV /AIDS**

| Unmarried women                                               | Karnataka | Orissa |
|---------------------------------------------------------------|-----------|--------|
| Number of Women                                               | 6452      | 7257   |
| Ever heard of HIV/AIDS                                        | 5944      | 4978   |
| Abstain from sex                                              | 40.1      | 31.7   |
| Using Condom correctly during each sexual intercourse         | 20.5      | 36.1   |
| Limit number of sexual partner and avoid sex with sex workers | 60.8      | 51.5   |
| Avoid sex with person who inject drugs                        | 75.6      | 49.3   |
| Avoid pregnancy when having HIV/AIDS                          | 24.2      | 13.0   |
| Other                                                         | 5.6       | 5.1    |

Respondents have different level of knowledge about how to avoid or reduce the chances of infecting HIV/AIDS in both the states. Out of this limit number of sexual partner and avoid sex with sex workers knowledge level is fairly better in both states as 60.8 in Karnataka and 51.5 percent in Orissa respectively. Unmarried women have avoid sex with person who inject drugs is high as 75.6 percent in Karnataka and the knowledge level in Odisha is 49.3 percent which is low when compare to Karnataka. In Odisha respondents in the study area is having better knowledge by using condom correctly during each sexual intercourse with 36.1 percent which is high when compared unmarried women of Karnataka with 20.5 percent. Knowledge level of abstain from sex in both states shows less than fifty percent and Karnataka respondents having knowledge of 40.1 percent and Odisha stands with 31.7 percent respectively.

**Table 8**  
**Knowledge regarding where to get tested for HIV/AIDS sources**

| Unmarried women            | Karnataka | Orissa |
|----------------------------|-----------|--------|
| Number of Women            | 6452      | 7257   |
| Ever heard of HIV/AIDS     | 5944      | 4978   |
| Where to get tested        | 80.2      | 54.7   |
| <b>Government</b>          |           |        |
| Hospital                   | 82.9      | 80.4   |
| CHC/PHC/Sub Centre         | 26.2      | 22.4   |
| RTI/STI Clinic, VCT/ICTC   | 7.5       | 1.3    |
| Other Public/NGO Hospitals | 6.2       | 0.9    |
| <b>Private</b>             |           |        |
| Hospital                   | 44.4      | 10.5   |
| RTI/STI Clinic, VCT/ICTC   | 6.9       | 0.7    |
| Other Private Hospitals    | 4.8       | 1.2    |

It is one of the important source of knowledge among the unmarried women population that where to get tested for HIV/AIDS. It appears that more than eighty percent have very good knowledge of where to get tested. This is comparatively better with Odisha's unmarried women respondents who have got 54.7 percent.

Government hospital is the main source of testing for HIV/AIDS in both the states with more than eighty percent. This knowledge level among respondent is slightly higher in Karnataka having 82.9 percent and the knowledge in Odisha is 80.4 percent. Followed by source of knowledge of testing among unmarried women in private hospital in Karnataka is 44.4 percent whereas for the same source in Odisha 10.5 percent respondents seek private hospitals. Testing at RTI/STI clinic, VCT/ICTC in government and private Karnataka respondent's knowledge shows 7.5 percent and 6.9 percent, whereas the same source of Odisha respondent level is 1.3 and 0.7 percent. Source of knowledge among unmarried women of other public/NGO hospitals in Karnataka and Odisha shows 6.2 and 1.2 percent respectively.

**Table 9**  
**Misconception of HIV /AIDS Transmission**

| Unmarried women                                 | Karnataka | Orissa |
|-------------------------------------------------|-----------|--------|
| Number of Women                                 | 6452      | 7257   |
| Ever heard of HIV/AIDS                          | 5944      | 4978   |
| Shaking Hands                                   | 9.6       | 7.1    |
| Hugging                                         | 11.6      | 7.2    |
| Kissing                                         | 14.2      | 9.3    |
| Sharing Clothes                                 | 12.4      | 10.6   |
| Sharing Food                                    | 14.6      | 10.8   |
| Stepping on urine stool of someone who has AIDS | 15.0      | 16.5   |
| Mosquitoes/Flies or Bedbugs bites               | 33.9      | 23.3   |

These misconception levels generally happen to be higher among rural unmarried women population rather than urban areas. Misconceptions of HIV/AIDS have been increasing with the increase in knowledge. The only answer of increasing misconceptions could be that people relate new knowledge with their pre-existing knowledge and most of the awareness programs have not tried enough to focus on what people think of HIV/AIDS. Therefore with increase in knowledge more and more misconception can be established. It is encouraging to know that younger women are more knowledgeable about HIV/AIDS than married. It is very surprising that,

misconception of HIV/AIDS transmission level through mosquitoes/fly or bedbug bites in Karnataka and Odisha shows from the above table is 33.9 and 23.3 percent respectively. Followed by stepping on urine stool of someone who has AIDS is more or less same in both the states as 15.0 and 16.5 percent.

**Table 3**  
**Family Life Education**

| Karnataka                                     |       |       |       | Orissa |       |       |
|-----------------------------------------------|-------|-------|-------|--------|-------|-------|
| Unmarried women                               | Total | Rural | Urban | Total  | Rural | Urban |
| Women Opined FLE/SE Important                 | 87.8  | 87.0  | 89.3  | 82.4   | 81.2  | 89.8  |
| Ever Received FLE/SE                          | 66.5  | 64.7  | 70.3  | 43.6   | 42.1  | 52.8  |
| Aware of legal minimum age for girls in India | 91.5  | 90.1  | 94.5  | 84.1   | 82.6  | 93.2  |

Family life education (FLE) is the one of the indicator for RT/STIs & HIV/AIDS among unmarried women in the study area. More than 80 percent of the respondents in both the states have aware of legal minimum age for girls in India. Unmarried women in both states have opined that FLE/Sex Education (SE) important. In both states more than 80 percent of rural women respondent opined FLE/SE is important. Karnataka respondents have better knowledge for ever received FLE/SE with 66.5 percent where as 43.6 percent Odisha respondents. This is one of the key indicators for RTI/STI and HIV/AIDS awareness.

### Summary & Conclusion

It is of general opinion that female are found to be more vulnerable to infect HIV/AIDS than males, because they have a lack of awareness than the male. The two states in the study area have different geographical area, population and same number of districts (30). According to 2011 census female population of Karnataka was high (30,128,640) when compared with Odisha (20,762,082). Although the Odisha state is having more number of villages than Karnataka, the overall literacy rate is 76.68 percent which is appreciable level than Karnataka's 75.36 percent. However in the study area respondents with ten or more years of schooling knowledge was high with 53.7 percent is one of the important factors for good awareness; knowledge and misconception level of HIV/AIDS in Karnataka whereas Odisha's respondent with ten or more year schooling was 29.7 percent. Education is the main source of awareness and knowledge which is lacking in both rural and urban areas of Odisha. It is observed that there is better correlation between education and awareness level in the state of Karnataka than Odisha.

Interestingly misconception level among Odisha's unmarried women was found to be less than Karnataka respondents. It is a fact that women who received family life education had better knowledge and awareness on reproductive health issues than counterparts.

### **Suggestions**

1. It is necessary to strengthen the RTI/STI control program particularly in the tribal areas.
2. Appropriate policy regarding FLE so as to address the unmet need for scientific learning/training on matter of family/sexual life among unmarried women and adolescent.
3. Awareness programmes to increase sensitivity about needs of unmarried women.
4. Trained male and female counselors should be recruited at all schools, Primary Health Centre's (PHCs) and Community Health Centre's (CHCs) and more effective school based HIV/AIDS education is needed in India.
5. Like China, parents in India also should get involved in their children's HIV/AIDS prevention education.
6. Efforts to create more awareness through media
7. Mobilizing and supporting other sectors such as education, NGOs, youth, criminal-justice, media, labour and armed forces to contribute to HIV prevention and care.

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## Social Conditions of the Child Labour – An Empirical Study in Eluru of Andhra Pradesh

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### ABSTRACT

*“Children are the greatest gift to the humanity and they are the representation of the beautiful creation of God”. They are the most tender, gentle and fragile one and needs to be handled and protected with immense care and delicacy. The concept of child labour is complex in its nature. The word ‘child labour’ is a combination of two components, i.e. ‘child’ in terms of his chronological age, and ‘labour’ in terms of its nature, quantum and income generating capacity. According to the statistics given by ILO and other official agencies 73 million children between 10 to 14 years of age re employed in economic activities all over the world. The figure translates into 13.2 of all children between 10to 14 being subjected to child labour. The phenomenon of child labour is multi-dimensional complex problem and deep rooted in the socio-economic fabric of the society. There are many factors responsible to this complex problem, so a comprehensive integrated approach is required to tackle and combat child labour. various factors leading to the child labour and the social conditions of the child labour have discussed in this paper.*

**Keywords:** Child Labour, Social Conditions, Poverty

### Introduction

Child labour is not uniquely a contemporary phenomenon and for Economic Historian, Sociologist and Anthropologist, it is not a new subject .for Economist, it is lively interest in the economic of childlabour is less than a decade old but has been growing exponentially, in line with public interest in the subject. One reason it may be argued ,that child labour has become such a fertilite research topic in economic is that it has arisen at a time when the literature on endogenous growth has matured and there is fairly widespread

agreement in the field that the corner stone of pro-poor growth strategies is investment in human capital. This investment occurs largely in children, in building their health and educational capital. Thus the inherent value of education apart it is recognized that it has functional role in encouraging productivity and growth even in society where nobody is very poor in absolute terms, there is a case for subsidizing Child labour is a very complicated development issue, affecting human society all over the world. It is a matter of grave concern that children are not receiving the education and leisure which is important for their growing years, because they are sucked into commercial and laborious activities which is meant for people beyond their years. According to the statistics given by ILO and other official agencies 73 million children between 10 to 14 years of age are employed in economic activities all over the world. The figure translates into 13.2% of all children between 10 to 14 being subjected to child labour.

Biologically, a **child** is generally a human between the stages of birth and puberty. The legal definition of "child" generally refers to a minor, otherwise known as a person younger than the age of majority. "Child" may also describe a relationship with a parent or authority figure, or signify group membership in a clan, tribe, or religion; it can also signify being strongly affected by a specific time, place, or circumstance, as in "a child of nature" or "a child of the Sixties."

### **Definiton of Work**

There are two issues here. First, what counts as work? The ILO Definition, for children as for adults refers to work that produce a marketable output? This includes waged work and also regular work done on a house hold farm or enterprise, the produce of which is commercially viable. It does not however, include domestic chores. To the extent that the burden of this work falls disproportionately upon girls, the work of girls will be under estimated compared with that of boys. The second question pertains to how hard a child must work in order that she be classified as a child labourer. The ILO definition for children under 12 (stated above) will count as labourer's children who work only a few hours a week, possibly without any negative consequences. Participation data collected in this way need to be supplemented with data on hours. For example, survey often collect information on hours worked in the year. Looking as some studies do, at the previous week alone can be

misleading which child labour is intermittent or seasonal. Since children may combine work with school and since educational deprivation is one of the reasons that child labour is considered undesirable, it is also useful to have comparable data on school participation.

### **Who is 'Child Labour**

Child labour is generally speaking, work for children that harms them or exploits them in some way (Physically, mentally, morally, or by blocking access to education). But there is no universally accepted definition of "Child labour". Varying definitions of the term are used by international organization, trade unions and other interest groups. Writers and speakers don't always specify what definition they are using, and that often leads to confusion. cannot question the treatment meted out to them.

### **Causes of Child Labour**

Poverty is one of the most widespread reasons for the child labour system in India, which means Indian children are forced to work out of necessity. Even the statistics at international level shows that most of the children come from poor families and generally from rural communities. Family poverty forces children in to the workplace. A parent whose children worked on the loom remarked, what is the use of keeping them with us and seeing them die: let them earn a living, let them eat. Many of the children wish to further their education, yet must work for survival. Part of the child labour problem rests upon the burden caused by the large family, which in itself is an underlying cause of poverty. A single most important factor in reducing child labour is economic growth.

### **Poverty**

Although multifarious causes are responsible for a wide spread of child labour in the developing countries, the extreme poverty of the household is the main cause. Generally the death, Disease, Physical and mental disability of the principal earner of the household are the major causes of extreme poverty of the household from where the child labour is drawn. For poor households the children are a great advantage because every working child means an additional income to the family. The children from these households are not sent to school so as to make them available for the labour market. The child labour drawn from the poor households take part in a variety of economic activities to supplement house hold income. It has also been observed that "to

a greater or lesser extent in every country and in every type of society children have taken part in domestic economy and in other economic activities which are necessary for the survival of the family as well as the group to which they belong". Another study conducted in a city of Orissa state pointed out that "due to poverty it becomes very much difficult for their parents to bring them up and hence engaged them in some form of economic activities to earn their livelihood and support their families. The child has to abandon all the privileges and happiness he should get as a child in a modern society for the sake of better living only."

A recent study conducted in one of the cities of Punjab in India has shown that the percentage of households below the poverty line declined tremendously from 82.67 percent to 60 percent due to income from child labour.

### **Unemployment**

Another important cause of child labour is the widespread unemployment and underemployment among the adults from the lower income strata of population. Large size of family with low income, lack of educational facilities, illiteracy of parents and ignorance of the households regarding the ill effects of labour on the future and health of their wards are some other causes of child labour. Besides, inadequate irregular or no family income is also responsible for child labour.

A Study conducted in the rural area of Dakshina Kanada, district of Karnataka showed that more than 55 percent of the wages earning children in the sample were contributing very significantly to their household income. The study also reported that child labour was also indirectly contributing towards household income by performing household chores and other menial time consuming activities in order to free adults especially women from household chores to perform more productive and important tasks.

### **Social Conditions**

Child labour is one form of child abuse. Children are abused by parents, employers, anti social elements etc. by subjecting them in unfavorable living and working conditions. Parents do not treat their children properly due to some economic, social and psychological constraints. Employers do not treat the child labour properly as they want to extract more work with low wages. Less prioritized and neglected by the parents, neighbors and society. Child abuse is the one of the causing factors for becoming the child labour.

**Unequal Distribution of Assets**

Debts and financial liabilities of the heads of house holds is also a cause of child labour. Sometime the children are pledged to the land lords / employers by their parents in settlement of debts. "At time, in the traditional societies children have to work to repay the debt incurred by parents and in the process the child gets bonded. A study conducted in a Sivakasi match factory Tamilnadu found that, "the child in the womb is pledged to the factory for consumption and maternity loans are obtained upon the undertaking that the child born would work for the factory. According to another study conducted on child labour in carpet. Industry of Kashmir it was found that," the majority of employers (85 percent) prefers to employ children due to various reasons such as easy availability cheapness, easier supervision, less employee – employer problems and because children unlike adults cannot question the treatment meted out to them.

**Research Methodology**

Objective of the present study

1. To study the socio-economic status of the respondents in the study area
2. To study economic causes of child labour working in the study area
3. To examine the social conditions of child labour in the study area

**Methodology**

The present study has selected two mandals viz ., Eluru mandal and Pedavegi mandal of West Godavari district for examining the working children in rural informal sector. On the whole sample of 200 respondents have been selected for the study in these two mandals using simple random sampling. Descriptive design has been adopted for the study. The purpose of Descriptive design is to portray accurately the characteristics of topic. The present study is strictly confined to the child labour in rural informal sector in particular zone. Particular relating to primary secondary data. This study could cover only two mandals viz., Pedavaegi mandal and Eluru mandals of West Godavari district. The researcher collected both primary and secondary data. The tools used for the collection of data were Interview Schedule, Information Discussions, Observation After completing the data collection, the processing of the data and the task of analysis started. At first, interview schedules were checked and the errors were located and corrected. The data collected were categorized and the code numbers were assigned to each question and each response. The schedules were coded the responses were transformed on code sheets. Then the data was analyzed and interpreted by using tables and diagrams.

**Table 1**  
**Distribution of Respondents by Sex**

| Sex    | Frequency | Percentage | Total |
|--------|-----------|------------|-------|
| Male   | 70        | (58.33%)   | 70    |
| Female | 50        | (41.67%)   | 50    |
| Total  | 120       | (100%)     | 120   |

Table 1 shows the distribution of respondents based on sex, in the present study the selected sample size of respondents are 120, out of this total sample 58.33% are male (i.e 70 respondent) and 41.67% are female ( i.e 50 respondents) this study analyzed that the percentage of female participation is less by 17% approximately less than male participation.

**Table 2**  
**Caste vs. Age of the Respondents**

| Caste           | Age in years   |              |                |                |                |                | Total          |
|-----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|
|                 | 8-12           |              | 12-15          |                | 15-18          |                |                |
|                 | M              | F            | M              | F              | M              | F              |                |
| Other Caste     | 4<br>(3.33%)   | 3<br>(2.5%)  | 3<br>(2.5%)    | 4<br>(3.33%)   | 3<br>(2.5%)    | 3<br>(2.5%)    | 20<br>(16.67%) |
| Backward Caste  | 2<br>(1.67%)   | 1<br>(0.83%) | 5<br>(4.17%)   | 2<br>(1.67%)   | 8<br>(6.67%)   | 2<br>(1.67%)   | 20<br>(16.67%) |
| Scheduled Caste | 10<br>(8.33%)  | 3<br>(2.5%)  | 26<br>(21.67%) | 23<br>(19.17%) | 4<br>(3.33%)   | 9<br>(7.5%)    | 75<br>(62.5%)  |
| Scheduled Tribe |                |              | 3<br>(2.5%)    |                | 2<br>(1.67%)   |                | 5<br>(4.17%)   |
| Total           | 16<br>(13.33%) | 7<br>(5.83%) | 37<br>(30.83%) | 29<br>(24.17%) | 17<br>(14.17%) | 14<br>(11.67%) | 120<br>(100%)  |

Table 2 caste analysis caste vs. age was respondent of sample as size 120 classified into 4 groups i. e other caste, Backward caste, Scheduled Caste, Scheduled Tribe based on three age group of male and female that is 8 to 12, 12 to 15, 15 to 18 years, this table shows the maximum participation belongs to Scheduled caste i. e 62.5% has the respondents belonging to age group 12 to 15 the male participation was 21.67% and female participation 19.17% (26 male respondents 23 female respondents) followed by age group 8 to 12 i. e 8.33% male and 2.5% female respondents i. e 10 male 3 female followed by the age group 15.18% female respondents of 7.5% and 3.3% of male i. e female and 4 male show the highest percentage of compared to the other caste, next stands other caste and backward caste i. e 16.67% ( 20 Other caste and 20 backward caste) the male category of backward caste under the age group of 15 to 18, 6.6% of male participation and among other caste under the age group of 12 to 15, the female participation was 3.33% shows that there is a

variation which is negligible, the participation scheduled tribe was the least percentage i.e. 4.17% only which means under the age group of 12.15% only 2.5% male i.e. (3 respondents) and 15 to 18 age group 1.67% of male that is 2 respondents is the least participation, signifies that out of total 100% the male participation under age group 12 to 15 year is highest i.e. 30.83% (37 respondents) and lowest participation of female under age group of study is only 5.83% (7 respondents).

**Table 3**  
**Distribution of Respondents by Cross Tabulation of Social Conditions**

|                                                          |                  | Frequency      |                | Total           |
|----------------------------------------------------------|------------------|----------------|----------------|-----------------|
|                                                          |                  | Male           | Female         |                 |
| Do you have any friends at your work place?              | Yes              | 40<br>(33.33%) | 35<br>(29.17%) | 75<br>(62.5%)   |
|                                                          | No               | 30<br>(25%)    | 15<br>(12.5%)  | 45<br>(37.5%)   |
|                                                          | Total            | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)   |
| Do you play any games with your friends in leisure time? | Yes              | 60<br>(50%)    | 45<br>(37.5%)  | 105<br>(87.5%)  |
|                                                          | No               | 10<br>(8.33%)  | 5<br>(4.17%)   | 15<br>(12.5%)   |
|                                                          | Total            | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)   |
| How much money spends for smoking?                       | No               | 51<br>(42.5%)  | 38<br>(31.67%) | 89<br>(74.17%)  |
|                                                          | Rs.5/- per day   | 13<br>(10.83%) | 9<br>(7.5%)    | 22<br>(18.33%)  |
|                                                          | Rs.10/- per day  | 6<br>(5%)      | 3<br>(2.5%)    | 9<br>(7.5%)     |
|                                                          | >Rs.10/- per day |                |                |                 |
|                                                          | Total            | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)   |
| Who gave money for drinking?                             | No               | 66<br>(55%)    | 47<br>(39.17%) | 113<br>(94.17%) |
|                                                          | My self          | 4<br>(3.33%)   | 3<br>(2.5%)    | 7<br>(5.83%)    |
|                                                          | My friends       |                |                |                 |
|                                                          | Total            | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)   |
| Do you your family member having                         | Yes              | 52<br>(43.33%) | 37<br>(30.83%) | 89<br>(74.17%)  |

|                                                                           |                                                              |                |                |                |
|---------------------------------------------------------------------------|--------------------------------------------------------------|----------------|----------------|----------------|
| drinking habit?                                                           | No                                                           | 18<br>(15%)    | 13<br>(10.83%) | 31<br>(25.83%) |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| Did you ever supply any wine while your owner drinking?                   | Yes                                                          | 16<br>(13.33%) | 9<br>(7.5%)    | 25<br>(20.83%) |
|                                                                           | No                                                           | 54<br>(45%)    | 41<br>(34.17%) | 95<br>(79.17%) |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| When you find children going to school/ your friend, how you think?       | I have no feeling                                            | 22<br>(18.33%) | 11<br>(9.17%)  | 33<br>(27.5%)  |
|                                                                           | I felt sad to miss the school                                | 48<br>(40%)    | 39<br>(32.5%)  | 87<br>(72.5%)  |
|                                                                           | I felt that I am lucky than those because I am earning money |                |                |                |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| Did you ever felt that to ran away from this work?                        | Yes                                                          | 59<br>(49.17%) | 36<br>(30%)    | 95<br>(79.17%) |
|                                                                           | No                                                           | 11<br>(9.17%)  | 14<br>(11.67%) | 25<br>(20.83%) |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| If any body supports you, are you ready to go back to the school?         | No                                                           | 7<br>(5.83%)   | 6<br>(5%)      | 13<br>(10.83%) |
|                                                                           | Yes                                                          | 45<br>(37.5%)  | 34<br>(28.33%) | 79<br>(65.83%) |
|                                                                           | I have to take my parents permission                         | 13<br>(10.83%) | 7<br>(5.83%)   | 20<br>(16.67%) |
|                                                                           | I have to take my owner permission                           | 5<br>(4.17%)   | 3<br>(2.5%)    | 8<br>(6.67%)   |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| Are your parents released that they would like to send you to the school? | Yes                                                          | 59<br>(49.17%) | 38<br>(31.67%) | 97<br>(80.83%) |
|                                                                           | No                                                           | 11<br>(9.17%)  | 12<br>(10%)    | 23<br>(19.17%) |
|                                                                           | Total                                                        | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| How do you think that the society looks                                   | Use full                                                     | 60<br>(50%)    | 39<br>(32.5%)  | 99<br>(82.5%)  |

|                                                                                |                                 |                |                |                |
|--------------------------------------------------------------------------------|---------------------------------|----------------|----------------|----------------|
| over you?                                                                      | Use less                        | 3<br>(2.5%)    | 1<br>(0.83%)   | 4<br>(3.33%)   |
|                                                                                | As most inferior in the society | 7<br>(5.83%)   | 10<br>(8.33%)  | 17<br>(14.17%) |
|                                                                                | Total                           | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| If you are interested in studies to go to school what do you like to want?     | Parents support                 | 36<br>(30%)    | 23<br>(19.17%) | 59<br>(49.17%) |
|                                                                                | Finance                         | 18<br>(15%)    | 10<br>(8.33%)  | 28<br>(23.33%) |
|                                                                                | Neat dress                      | 5<br>(4.17%)   | 8<br>(6.67%)   | 13<br>(10.83%) |
|                                                                                | Study material                  | 11<br>(9.17%)  | 9<br>(7.5%)    | 20<br>(16.67%) |
|                                                                                | Total                           | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| How do you feel about Residential Bridge Camp studies?                         | Good                            | 12<br>(10%)    | 17<br>(14.17%) | 29<br>(24.17%) |
|                                                                                | Bad                             |                |                |                |
|                                                                                | Average                         | 58<br>(48.33%) | 33<br>(27.5%)  | 91<br>(75.83%) |
|                                                                                | Total                           | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| What is your interested area?                                                  | Own villages                    | 17<br>(14.17%) | 17<br>(14.17%) | 34<br>(28.33%) |
|                                                                                | Relatives village               | 11<br>(9.17%)  | 2<br>(1.67%)   | 13<br>(10.83%) |
|                                                                                | Cities/ Town                    | 42<br>(35%)    | 31<br>(25.83%) | 73<br>(60.83%) |
|                                                                                | Others                          |                |                |                |
|                                                                                | Total                           | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
| After 18 years would you like to do independently to work in any organization? | Yes                             | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |
|                                                                                | No                              |                |                |                |
|                                                                                | Total                           | 70<br>(58.33%) | 50<br>(41.67%) | 120<br>(100%)  |

Based on social conditions table 3 gives a detail analysis on distribution of respondents by cross tabulation the first condition of socialization regarding

their relation with friends in their working place. 33.33% of male (i.e.40) and 29.17% of female (i.e. 35) said yes the remaining 25% of male 12.5% of female said they are not having any friends in their work place 50% of male i.e. 60 and 37.5% of female i.e. 45. expressed that they spend their leisure time by playing games with their friends the remaining 8.33% of male and 4.17% of female said they spend time idle. c regarding spending of money for smoking where 42.5% of male and 31.67% of female said they never spend money for smoking where 10.83% of male and 7.5% of female spend Rs. 5. Per day. And 5% of male and 2.5% of female spend Rs 10 per day.

Questioned about who lends money to them for drinking 55% of male (i.e. 66) and 39.17% of female (i.e. 47) said no one, but 3.33% (i.e.4) of male and 2.5% of female i.e.3 said they lend money on their own. when the question was raised by researcher regarding the habit of drinking by family members 43.33% of male (i.e. 52) and 30.83% of female (i.e. 37) said their family members are habituated for drinking whereas 15% of male and 10.83% of female said none of their family members had this habit. Regarding the supply of wine by the respondents to their owner 45% of male and 34.17% of female said no but 13.33% of male (i.e 16) and 7.5 % of female (i.e 9) are forced to supply wine while their owner was drinking.

In this study while researcher asked the respondents about their feelings when they find other children going to school 40% of male (i.e. 48) and 32.5% of female (i.e.39) said they felt very sad for missing their school education. While remaining 18.33% of male and 9.17% of female said they have no feeling because of no chance entering into school another most important social condition in this study is regarding the opinion of respondents wherever they came across harsh times and feels to run away from their working place. Regarding this 49.17% of male and 30% of female said yes.

Whereas 9.17% of male and 11.67% of female expressed that for them there is no other alternative. When questioned them by asking if anybody support them to go back to school are they willing to come and from their working place 37.5% of male (i.e. 45) and 28.33% of female (i.e.34) answered yes this is the main highlight of this study. 10.83% of male and 5.83% of female said they have not taken permission from their parents and 4.17% of male and 2.5% of female said from their owner. But 5.83% of male and only 5% of female expressed they are not interested to go back to school.

Another positive analysis of this study based on social condition is 49.17% of male (i.e. 59) and 31.67% of female i.e. 38 said their parents realized the importance of education and wants to send these respondents to school. But still 9.7% of male and 10% of female respondents said their parents does not want them to send back to school though they are interested in studies regarding their service to society 50% of male and 32.5% of female felt their service are comparatively use full to the society. And only 2.5% of male and 0.83% of female felt they are use less but 5.83% of male and 8.33% of female felt they are most inferior section in the society.

The researcher in parents study focused the attitude of respondents regarded their interest in studies and need of support from parents i.e. 30% of male and 19.17% of female expressed the need of parents support, 15% of Male and 8.33% of female said they should have financial support, 4.17% of male and 6.67% female need of neet drss and specially regarding study material 9.17% of male and 7.5 % female stressed for ther need, regarding their opinion about residential bridge camp studies highest of percentage i.e 48.33% male and 27.5% female said it is average but 10% male and 14.17% female expressed to is good to have this pattern of camp studies and they are very clear about their interested area 35% male ( i.e.42%) and 25.83% female ie 31 said they are interested in cities or town, but 17% of both male and female decided to be in their own villages and only 9.17% of male and 2% female prepared their relatives, when questioned about their future after crossing 18years of age 58.33% of male ( i.e.70) and 41.67% female ( i.e 50) expressed that they would like to take any job either self or willing to wo0rk in any organization, this study clearly focus the positive attitude of little children being of optimistic want to become good produce to the society.

### **Conclusion**

Many developing countries like India are facing number of social problems and one such problem is the child labour. This has disgraced the entire subcontinent giving it the distinction having the largest number of child labourers in the world. The solution to child labour can be to first recognize the causes of this dilemma: these include poverty, family burden to pay of standing debts, the general Indian attitude towards child labour, the irrelevant and inaccessible prevailing educational system and the inefficiency of the protective legislation for working children. A solution to this predicament can be achieved through educational improvements, as this will over come other

problems influencing the Indian child labour crisis. The child labour in Indian is caused by multitude of problem specially their social conditions. In order to overcome these obstacles, Indians must first recognise that a child labour crisis exists and then address each of its sources individually, some one must be willing to accept this responsibility for the injustice done to the children, if it is to be eradicated, it must be viewed that child labourer are like caged birds and now they are to be set free.

### **Suggestion**

The protection and development of children require a multi prone approach. It compasses a number of areas such as Social Conditions, health, nutrition, education and family planning. Any practical and realistic strategy of combating the problem of child labourers should aim at progressive elimination.

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## **Building Infrastructural Facilities: A Critical Challenge before the Economy of India & Bihar**

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### **ABSTRACT**

*The globalised economy of India of the new millennium is facing huge challenges on a number of fronts like poverty, unemployment, price-rise, inter-personal and, in the Balance of Payments, mounting burden of debt etc. are simply a part of the biggest challenge of building up the required level of infrastructural facilities for accelerating the pace of economic development in the economy. India's economic growth is intertwined with its infrastructural development and there is a strong positive association between the two. Infrastructure may be defined as the as the basic needed for the operation of a society or an enterprise. The nature, extent and rate of growth of infrastructure, determine the possibility and extent of development in an economy.*

*Keeping the angles of vision to the available literature on the subject one can easily deduce there from that adequacy of infrastructure helps to determine the success and failure of the economy in, generating economies and keeping the cost level under check and there by restricting inflation to go beyond control. The global experience confirm to the fact that an investment in infrastructure to an extent of 20 to 25 percent of GDP is a sound standard from the perspectives of sustainable development. Scarcity of infrastructural facilities is a serious issue not only for ensuring 8 to 9 percent rate of growth but also for reducing the percentage of population below poverty line, reducing the mounting pressure of unemployment, improving P.Q.L.I., H.D.I., G.D.I., etc. The challenge has of course acquired a monstrous size and shape, yet the battle against it can be fought successfully.*

**Keywords:** *Infrastructure, diversifying production, inter- regional inequalities, chronic imbalances, physical and organizational structures, debt-capital market.*

**Introduction**

The globalised economy of India of the new millennium is facing huge challenges on a number of fronts like poverty, unemployment, price-rise, and inter-personal and inters- regional inequalities, chronic imbalances in the Balance of Payments, mounting burden of debt etc. However viewed in a broader perspective, these and other similar challenges are simply a part of the biggest challenge of building up the required level of infrastructural facilities for accelerating the pace of economic development in the economy. It is so, because the diversification of production, expansion of trade, control of population growth, alleviation of poverty, improving the quality of population and besides them protecting and improving the condition of environment are to a great extent determined by the level of infrastructural facilities available in the economy. The World Development Report 1994 had clearly contended that “the kind of infrastructure put in place also determines whether growth does all that it can to reduce poverty. An important ingredient in China’s success with rural enterprises has been a minimum package of transport, communication and power at the village level. Rural enterprises in China now employ 18 percent of the labour force i.e. about 100 million people and produce more than one third ( $1/3^{\text{rd}}$ ) of national output.

In para9.72 of Indian Economic Survey, 2000-01, the GOI herself admitted that, “in fact one of the biggest challenges facing the Indian Economy today is to step-up infrastructure investment and upgrade the technology for better services”. In the Indian Economic Survey, 2005-06, it again reiterated in Para 9.96 that, “India’s economic growth is intertwined with its infrastructural development and there is a strong positive association between the two.”

**The Meaning**

The world infrastructure is a complex term encompassing multitudanal dimensions making any single definition of the term to be difficult. The International encyclopedia of social sciences, The American Heritage Dictionary of English Language, The online Compact Oxford Dictionary etc define the term in different ways, yet with a common aspect in all of them as being technical structures that support a society, facilities, the production of goods and services, distribution of finished products to the markets and delivery of basic social services like schools, hospital etc. The development economist like Rosenstein Rodan, R. Nurkse, A.O. Hirschman etc. used the term social over capital (S.O.Cs) as synonymous to infrastructure

interchangeably puts one to some sort of restrictions. Furthermore, classification of term a 'hard' and 'soft' infrastructure, economic and social infrastructures, civil and military, financial, critical and urban infrastructure infuse additional complications in defining the term in a single way. In order to make it brief and simple, it may be defined as the as the basic physical and organizational structures needed for the operation of a society or an enterprise broadly in the forms of communication, transportation, energy and electrification, irrigation sanitation ,institutions etc .e.g. power, telecommunication, water supply, sanitation, sewerage, piped gas, solid waste management, etc. as public utilities, roads, bridges, dams, canals, warehousing as the public work and financial systems including banking, business logistics facilities etc as the economic infrastructures. In the theory of public economics, infrastructural assets such as railways and highways are treated as public goods in a way that they carry a high degree of non-exchangeability and non-rivalry. Further, these properties lead to externality free ridership and spillover effects that distort competition and market efficiency. That is why the govt. is accepted generally as the best actor to supply the public-goods.

### **Role and Review of Literature**

The nature, extent and rate of growth of infrastructure, determine the possibility and extent of development in an economy. The size and working of investment multiplier in Keynesian General Theory (1936) depends on an initial increase in autonomous investment. When the Parliament of United States of America enacted legislation in the year 2009 called "The American Recovery and Reinvestment Act, 2009, it had the primary objective behind it to make a bulk increase in investment in infrastructures as a means to provide stimuli to the economy. A.O. Hirschman (1958), Rosenstein Rodan (1965), R. Nurkse (1966) etc posited a clear vision that in order to pull the economy out of the low level equilibrium trap' (Nelson) or the vicious circle of poverty' (Nurkse), it requires a big push, (Rodan) with a critical Minimum Effort, (Leibenstein) containing a requisite amount of S.O.C. or the infrastructure facilities. It thus becomes a significant prerequisite to "take-off" in practical sense of the term.

Besides these theoretical frameworks, since 1980s economists have produced a vast number of papers based on empirical researches pertaining to the evaluation of extent of impact of various infrastructural items collectively or

individually on production, productivity of different sectors of the economy on reduction of inequality, on improvement in administrative efficiency so on and so forth. Binswanger (1989) studied the effects of infrastructural development on regional inequality in Indian Economy. Using the United States of America's state level data of govt. expenditure Aschaur (1989), Munnel (1990), Ford and Poret (1991) etc studied the impact of infrastructural investment on overall economic growth over there and found an output elasticity of around 0.54 over there. However, Gramlich (1994) questioned these findings of earlier studies and said that if the return on such investments are so high then why the capital does not flow only to infrastructure sector alone? His finding was that one percent increase in public infrastructure capital has in the economy of U.S.A. led during the period between 1949 and 1985, to an increase in private business by 0.36 percent, which also contradicts the expression of a strong positive relationship between the increase in per capita stock of infrastructure per capita procuring 1 percent rise in GDP across the country. Fernald (1999) in his study found the output elasticity of investments in roads to be around 0.35 in U.S. Industries. The World Bank Investment Climate Assessment (ICA) survey (2005) revealed that 20% sample entrepreneurs from East Asia, 55% from Middle East, 33% from Japan and Vietnam came out with views that poor extent of infrastructure happens to be the main obstacle in their business. On the other hand, the studies conducted by Autle in 1983 and 1984 found that infrastructure per unit of land in agriculture had a strong positive impact on agricultural productivity in all categories of country including India. While study conducted by Ahmad and Hussain (1990) quantified the result by stating that infrastructural development increased agricultural production by 32% and household income by 33% in Bangladesh. Ramesh Chand and Sonia Chauhan (2002) found in their study that infrastructure in the form of irrigation, road density, market density, supply of institutional credit and electricity have been important factors in promoting agricultural diversification in India.

A number of studies have also been carried out for evaluating the impact of infrastructure on poverty reduction. The World Development Report (1994) holds that, most of the poor are in rural areas (80 million in urban while 244 million in rural India) and the growth of farm productivity and non-farm productivity in rural employment is linked closely to infrastructure provision and if governance and institutional frameworks are strengthened, the linkage between infrastructure and reduction of poverty can become stronger.”

Richa Singh(2004) in her study examined the impact of infrastructural development on agricultural and rural poverty using cross section data from 16 major states of India and found a strong co-relation between the ranks(on the basis of development) of states and status of economic and social infrastructure available over there. The study further revealed that the indicators like irrigation, rural roads, institutional credit and rural literacy are the most critical in enhancing agricultural productivity, while those along with electrification are also more vital for rural poverty.

In the background of world- wide recognition of infrastructure as the wheels of development, the government of India rose on the occasion and constituted a committee on infrastructure (Rakesh Mohan, 1995) to assess the investment requirements of fulfilling the infrastructural requirements of the country. Later on, the Prime -Minister Committee on Infrastructure was also set up in 2004 to provide a boost to the development of infrastructure in the country in general and in rural segments in particular. Appreciating a demand for greater attention to be paid to the rural segments of the economy, the government of India set up a” Rural Infrastructure development Fund” (RIDF) in the year 1995, which was supposed to create a land mark in this respect. In appreciation of the importance attached with the issue, the Indian Economic Association debated widely over the issue by setting it as a separate theme for its annual conference held at Hyderabad in the year 1997. In that conference, the report prepared by Rakesh Mohan was discussed in all its length and breadth. A host of other papers presented in the conference championed without exception, to the cause of augmenting the level of investment for raising the size of infrastructure in the economy to a significant level.

Keeping the angles of vision to the available literature on the subject one can easily deduce there from that adequacy of infrastructure helps to determine the success and failure of the economy in diversifying production, generating economies and keeping the cost level under check and there by restricting inflation to go beyond control. It may also help in expanding trade coping with population growth. Infrastructure having the high amount of linkages especially in terms of production, adds to mobility of the factors of production, optimizing their uses and efficiency. It has also a direct bearing on expanding the size of market along with the volume value terms of trade, improving the quality of production, accelerating the pace of socio economic development, reducing inter-regional and inter-personal inequalities. Moreover, the

protection of as well as improvement in the conditions of environment are also, to a great extent determined by the level of infrastructural facilities in an economy. The contribution of infrastructure in environment sustainability, clean and safe drinking water, sanitation, non polluting source of power, safe disposal of solid wastes etc. cannot also be ignored. The kind and level of infrastructure also determines the efficiency of governance especially from the point of view of monitoring, supervising, regulating, guiding, controlling and none of the least implementing the public programs. It of course can be effective in controlling the crimes, managing and regulating traffic etc. The efficacy of infrastructural facilities in making the knowledge and information revolution a success is quite proven.

### **The Status of Infrastructural Facilities in India**

The global experience confirm to the fact that an investment in infrastructure to an extent of 20 to 25 percent of GDP is a sound standard from the perspectives of sustainable development. It is quite in line with the Hirschman's view that growth via excess of S.O.C. products smooth, faster, cheaper and uninterrupted development. Judges from those standpoints the status of infrastructure can be assessed. The National Accounts Statistics provides the main source of reviewing the records of infrastructure in India which uses the key categories as (I) electricity, Gas and Water Supply, (II) Transport, Storage and Communication, subdivided further into Railways and Other transports.

Total investment as per NAS in India in infrastructure ranged from 4.5 to 6 percent during 1980s and 1990s broadly averaging 5.5 percent of GDP during the period. The midterm appraisal of the eleventh five year plan stated that the percentage of infrastructure investment in the GDP stood at 7.8 which may go around 8.37. It is thus 'miles to go' up-to the global standard.

However, sectoral review of the picture presents slightly a different story. The share of communication sector did improve from 0.3% of GDP in 1980s to 0.8% of GDP during 1990s. The share of Railways has remained almost constant during the period. (Due mainly to cheap politics). The share of electricity gas and water marginally increased from 2.5% to 3% of GDP. What is notable in this respect is that the bulk of infrastructure sector investment came from public sector save and except the road cargo and bus transport, primarily, other transport where private participation has marginally improved.

Over the decade or so the power sector has also recorded a relatively higher contribution of private investment. The public sector has also not displayed a big enthusiasm in infrastructure investment as is evincible from the fact that out of total public sector investment the percentage of infrastructure investment remains 35% during 1980s which increased due to growing attention towards it up to 47% in 1990s but went only up to 50% in 2010s.

One encouraging indication came in from of increasing productivity of infrastructure investment over the decades. The value added from infrastructure investment rose from 6.5% in 1980s to 10% in 1996 which almost conform to the levels of high and middle income countries. However the figures regarding value addition may either be due to underestimation of value added in the other sectors or due to more efficient uses of infrastructure services by the rest of the economy.

Everything said and done, one can hardly escape eyes from the prevailing crises arising out of scarcity of infrastructure facilities. Transport sector crises of its scarcity of fuel and electricity, fuel sector allege scarcity of transport and electricity sector alleges the two. Despite more than seven decades of plan efforts, the average length of roads in India is 256.70 per one lac of population and 75 km per 100 km of area. In Bihar, these figures are 90.10 and 50.80 kms respectively. The average distance of a village from all weather roads is of 2 kms. The average tele-density is 2.90 per thousand of population and it is 1.06 per square kilometer

### **Steps Needed**

Scarcity of infrastructural facilities is a serious issue not only for ensuring 8 to 9 percent rate of growth but also for reducing the percentage of population below poverty line, reducing the mounting pressure of unemployment, improving P.Q.L.I., H.D.I., G.D.I., etc. The planning Commission of India had estimated additional investment requirements for building infrastructural facilities up to satisfactory level of demand for them coming to a size of \$514 billion equivalent to Rs. 2054205 crores for the eleventh five year plan, out of which 36 percent was targeted to be coming from the private sector, and it was almost fulfilled. Thanks to failure of public sector in this respect for telling the rest of the story regarding continuation of the vagaries. For the twelfth five year plan also the planning commission has made an exhaustive exercise and has targeted to mobilize additional investment for infrastructure sector to a

tune of \$1025 billion equivalent to Rs.4099240 crores during XIIth five year plan out of which Rs.2049620 i.e. exactly 50% is expected to come from private sector.

### **The Steps Ahead**

The challenge has of course acquired a monstrous size and shape, yet the battle against it can be fought successfully. Deepak Parikh committee has suggested for exploiting the domestic debt-capital market for the purpose of mobilizing additional resources and tapping the potentials of insurance sector, enhancing the participation of banks, financial institutions, and Non-Bank Financial Companies (NBFC) specializing in infrastructure financing. The government of the day is required to adopt and fit itself in to a changed role and act to

1. Attract private participation,
2. Assure a legitimate rate of return,
3. Ensure customer satisfaction
4. Set pricing
5. Encourage competition linked with efficiency
6. Resolve conflict without delay
7. Establish a judicious mix between domestic and foreign investment
8. Swapping the resources meant for rural development and welfare programs which actually get used for funding elections to build local/village level industrial units.
9. Eliminate bad quality of engineering and planning at DPA preparation stage
10. Tender the unviable project
11. Correct the linkages in the standardization of sub-optimal contract
12. Eliminate delay in fixing of locations, delivery of lands, implementation of project etc
13. Consume availability and development of skilled and semi-skilled manpower
14. Correct the weakness prevailing in the nodal agencies and the public sectors undertakings
15. Optimize procurement costs of public sector undertakings.

## Cinema and the Environment: An Inquiry on Ecocritical Academia

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### ABSTRACT

*The study is an exploration on cinema and the environment and cinematic ecocriticism. An ecologically focused criticism is a worthy enterprise primarily because it directs our attention to matters about what we need to think. Cinematic texts, with their audiovisual presentations of individuals and their habitats affect our imaginations of the world around us, and have been largely responsible for reinforcing our association with nature particularly how we are connected to the ecosystem. While ecocritics encourages to think about our intersection with the environment, cinema transmits values with profound ecological implications. While film and media scholars have always explored cinema's cultural negotiations, until recently ecocritical perspectives have been largely absent in the scholarship. It is important to understand how individuals structure and construct environmental messages portrayed in films. The article concludes that film is a cultural product and any such discourse within an ecocritical premise would necessarily demand a clear understanding of the nature-culture debate.*

**Keywords:** Ecocriticism, cinematic texts, environment, ecosystem

### Introduction

With the growing awareness that our world is at an increased risk and that our lifestyles are impacting with ever greater devastation on the earth's ecosystems, a new genre of the environmental film is garnering wider attention. Ecocinema was originally coined by Scott MacDonald in 2004 in an article titled 'Towards an ecocinema'. Such films overtly engage the audience with environmental justice concerns and have broader philosophical implications of what it means to inhabit this planet. These movies sometimes aspire to present more biocentric and ecocentric viewpoints rather than overtly

anthropocentric – human centered views or interpretation of natural phenomena. Cinema's cultural negotiations from an ecocritical perspectives have been largely absent in the scholarship of film studies. This article seeks to explore how individuals structure and construct environmental messages portrayed in films. While technological developments have affected almost every aspect of human life, it has its devastating effect as well. Bavadam (2010, p.3) points out that there are issues that most people do not think are important as they do not impact people's lives and so nobody sees environmental issues as their responsibility. Today climate change has become a major concern all over the world and India is among the extreme risk countries in terms of climate change and environmental risk. The annual release of British risk consultancy Maplecroft's 'Climate Change and Environmental Risk Atlas' reveal that 31 percent of global economic output will be based in countries facing extreme risks from the impacts of Climate change by 2025.

There is a strong scientific consensus that the global climate is changing and that human activity contributes significantly. This consensus is attested to by a joint statement signed in 2005 by 11 of the world's leading national science academies representing Brazil, Canada, China, France, Germany, Italy, India, Japan, Russia, the United Kingdom and the United States. While there is a need to create awareness on environment, it becomes even more pertinent to understand how environmental issues are captured in the public imagination. Environment awareness is one of the important issues which filmmakers should take utmost concern in meaningfully communicating to the people. Cinema being a powerful medium plays the role of disseminator of information, and being an agent of change. It can bring issues to the center of debates and discussions thereby suggesting alternatives to people and policy-makers.

Ecocinema actively seeks engage viewers in addressing issues of ecological importance, raising awareness and at times political action. However, it should be noted that 'ecocinema' as a term is still debated and evolving in the canon of media studies. The storyline in these movies are about the problems that face planet earth. Environmental movies have been around for a long time and the concept is certainly not a new one. While there have always been attempts by filmmakers across the globe in framing the threats of global warming, dramatic changes in climatic conditions, and the effects of greenhouse gases, serious academic pursuit on cinema from an ecocritical perspective is of recent origin.

Cinema have the potentiality to bring about change in every aspect of life and any indifference to adapt to change would only mean leaving the planet in a worse state than the one we live in at present. All of our efforts in the name of technological advancements and progress have only served to endanger animals, birds, plants and many more. Change on a global scale is definitely the need of the hour, or else all the toxins we release daily into the ozone combined with human expansion on land will have devastating effect we may not possibly imagine. Accepting change has never been easy for most people and many skeptics abound who refuse to accept that our progress has caused any harm to the universe at large. Environmental movies and documentaries showcase the many diverse ways in which our efforts at advancement have changed the way the planet looks today. Movies such as 'Avatar', 'The Day the Earth Caught Fire' and 'The Day After Tomorrow' etc. have served to raise critical environmental issues, bringing them to the attention of people and creating awareness of the growing problems and threats. In exploring the ever-fluid realities of the contemporary environment, cinema remains one of the most versatile medium which can espouse change. Cinematic form presents a multisensory experience of the lived world that extends beyond verbal narrative, already so powerful in its own right. Filmmakers have access to unique representational strategies for exploring the past, present and future of our physical environment. Viewers, in turn, access a rich opportunity to examine locales around the globe through documentary, fiction or fantasy film.

In 'Landscape and Film', Lefebvre (2006) observes that "one of the first wonders the cinema offers its viewers is that of the natural world in movement." Eadweard Muybridge's 'Horse in Motion' (1878) and Louis Le Prince's 'Roundhay Garden Scene' (1888) explore human relationship with the environment. In spite of innovations and technological developments in filmmaking, these simple themes remain just as compelling today as they have ever been. They are not only enriched but are further complicated by contemporary realities such as climate change, chemical toxicity, and socio-environmental issues. Such challenging issues have been widely explored by filmmakers across the globe in the ever burgeoning realm of ecocinema.

### **Ecocriticism and Cinema**

Ecocriticism as a new movement of the early 1990's is still in its infancy in the canon of literary discourse. While this burgeoning of literature-environment has continued, the field for environmentally-valenced critical

inquiry is immense in duration and range given that human beings are inescapably biohistorical creatures who construct themselves at least partially through encounter with physical environment (Buell,1999). Cheryll Glotfelty's "Introduction of Ecocritical Reader" offers a many-mansion definition of ecocriticism as "the study of relationship between literature and the physical environment" in any and all ways that these two terms can be brought into relation.

Ecology, by its very definition is unrestricted; it is impossible to say where nature stops and culture begins or vice versa (Nadia Bozak). Ecocriticism which has its roots in literary study has captured the imagination of scholars in film studies in recent times. If we agree with Barry Commoner's first law of ecology that "Everything is connected to everything else" then it could be opined that literature does not float above the material world but rather plays an important part in an immensely complex global system in which ideas synergize. Ecocriticism as a discipline traditionally rooted in literary studies could very aptly be applied in cinematic studies by examining how the representations of nature in film inform or modify existing ecocritical premises.

McLuhan's (1964) advocacy of the 'global village' has lent momentum to the emergence of an imaginary world which has assumed increasing prominence in contemporary cinema. Cinema today plays a significant role in perpetuating what might be called global mythologies: ideological discourses about the world and humanity's relationship to it. This awareness sparks a desire to contribute to environmental restoration as Historian Donald Worster argues that humanities scholars have an important role to play. Ecocriticism grew in areas previously untouched by literary theory. However, despite significant development ecocriticism still has the potential for further growth and improvement (Harrington & Tallmadge, 2000). While ecocinema fundamentally questions the ways of understanding environmental issues, literary discourses on such issues could contribute to an individual's level of understanding on the environment. It should be portrayed from a wider perspective – its implications and the global inequities of climate change. This requires nothing less than a revolution in our sense of civic responsibility. There has been a sustained engagement by filmmakers across the world by and large, yet the challenges for the environmental filmmakers remain given the manner in which filmmaking operate. In a way the ever burgeoning requirement of the audience have perhaps made environment filmmaking all

the more challenging. There has been a growing feeling that cinema can play an important role in raising awareness on environment. While films reinforce our belief system, it certainly could create environmental apathy among the viewers. This necessitate an understanding of how individuals structure and construct environmental messages portrayed in films if we believe that films shape and affect peoples' perception. In my view, an ecologically focused criticism is a worthy enterprise primarily because it directs our attention to matters about what we need to ponder upon. While ecocritics encourages to think about our intersection with the environment, cinema transmits values with profound ecological implications.

Film critics have been exploring the potential of cinema to present new ways of relating to the nature. There is an understanding that cinema has been largely responsible not only for reinforcing our association with nature, but also for showing how we are connected to the ecosystem. There is a growing awareness that our world is at increased risk and that our lifestyles are impacting the earth's ecosystems. This calls for a concerted effort in preserving the environment through films. There are scores of documentaries on environment but we still need to make a dent in such endeavour in the celluloid.

### **Ecocritical reading of the cinematic text**

Ecocritical theory lends itself to providing newer ways of exploring film as a medium of study from an ecocritical perspective. Cinematic ecocriticism examines the representation of nature in film as opposed to the representation of nature in written text. It assesses how the portrayal of nature in film informs or modifies our existing ecocritical premises. Furthermore, it provides some insights on how films influence our theorization of anthropomorphism and anthropocentrism. Cinematic experience is inescapably embedded with different aspects if we are to look at the entire process of filmmaking -from production to distribution and finally consumption. Cinematic texts with their audiovisual presentations of individuals and their habitats affect not only our imagination of the world around us but also our actions towards it. It is only recently, notably since themid-1990s that a growing number of scholars have begun to critically interrogate cinema's ecological dimensions and their implications. The application of ecocriticism has rather been lacking in film studies. Rarely has cinema been viewed through an ecocritical lens, nor has there been much evidence or a sustained application of ecocritical understanding of cinema. Viewers may be more inclined to believe that the

filmmaker has full control over nature and in some way capture the essence of nature, a flawed belief given the high degree of manipulation and management that is present in every frame in filmmaking. This lends itself to the existence of anthropocentrism and anthropomorphism which are apparent in both written and filmic texts which mould themselves to the medium in which they are presented forcing us to analyze them accordingly.

Film analysis in an ecocritical premise necessitates a complete understanding on the ontology of film and the effects of seeing an image on screen, especially images of nature. Film's moving images are complex manifestations of photographic images because films in essence are a series of photographs (24 frames per second) presented in a manner in which illusion of movement is created through 'persistence of vision'. Thus, in analyzing the ontology of filmic images, it is imperative that we observe the basic unit of filmic images-the photograph. To begin with the obvious - a photograph is a representation of the object that is depicted in the photograph. A photograph is not the object itself. When we look at a photograph we are seeing things not present; we see things that are not here now and observe representations of images that were there then (Cavell, 1979).

Any attempt in theorizing about the environment using ecocritical principles would require not only an understanding the manner in which film is manufactured but the way how it is analyzed. Further, when representing the environment on film, what concerns the ecocritic is not only the importance given to the human characters, but also the authenticity of the environment that is being represented. The process of filmmaking requires substantial editing through 'montage' (though not often) in which the essence of what is captured as something 'natural' might get deviated in such a creative exercise upon which filmmakers heavily rely upon.. This perhaps might make ecocritical reading of the film more complex given the manipulative nature of this editing technique.

Cinema which is called as the 'seventh art' is unique than any other art forms given its distinctiveness which is characterized by its collaborative nature involving the director, producer, actors, marketers etc. It involves not only a sophisticated technological apparatus but also colossal amount of money which is unparalleled among other art forms. This raises the likely possibility of the counter productivity that may accompany films within eco-friendly and anti-anthropocentric intentions. One would assume that a film with green

intentions would exhibit greater awareness due to its sheer cinematic storytelling capabilities. Reading the nature anthropomorphically is a characteristic not only of fiction films, but of documentary films as well. Given the popular belief that documentary as a 'treatment of actuality' of some sort devoid of any kind of re-enactments may not necessarily be so as documentary filmmakers may manipulate images which may reflect the anthropocentric preoccupations of its director. Thus, when nature documentaries present nature to its audience, it may become apparent that what is being depicted is every bit a construction as a fiction film (Armbruster, 1998). This may affect ecocritical reading of the film. Werner Herzog argues on the non-existence of a difference between fiction and documentary: "So for me, the boundary between 'fiction' and 'documentary' simply does not exist; they are all just films. Both take 'facts', characters, stories and play with them in the same kind of way"(Cronin, 2002). These general observations of the nature of an ecocriticism designed for reading film must only be taken as that general. It must be understood that specific scenes in films may prove that any guidelines may not be generalized as easily as desired. Thus, no image exists in isolation, and to read an image in its entirety is to be aware of the context of the image (Ingram, 2004). Moreover, reading a film is both an optical and a mental intellection which in a way would reflect multiple interpretations.

Can there be a cinema-environment-ecocriticism premise which could dictate the audiences' cinematic experience? We seem to have transgressed the very periphery of the literary and the question arises whether if there is no limit to 'ecocriticism', the term has been used to denote anything substantive. But that would be a shortsighted response. Rather, the foregoing study on green rhetoric should be seen as testifying crucially to a) the interdisciplinarity of vision that is or at least should be at some level present in ecocritical thought even when it is trained exclusively on poems and novels b) the importance of many ecocritical practioners of the link between literary representation of the environment and the realms of sciences and social science in particular and c) the transferability and pertinence of ecocritical expertise – the exegetical and conceptual tools requisite to textual analysis – to virtually all aspects of environmental inquiry (Buell, 1999).

### **Conclusion**

Given that film is a cultural product and any such discourse within an ecocritical premise would necessarily demand a clear understanding of the

nature-culture debate. While such debates have placed ecocriticism in political, cultural and social contexts use of cultural texts to apply ecological principles has not been fully canonized in ecocritical academia. The consideration of cinema as an analytical text is a comparatively recent trend in ecocritical study. While we acknowledge the current limitations of ecocriticism, its diversity of voices would expand its horizon to contribute to a wider discourse on ecocriticism in all its applaudable wholeness. Ecocriticism could highlight the connections and the disjunctions between natural and cultural economies by drawing out the complex connections between human-nature interactions. One could look afresh the manner in which environment is understood in different media forms if we believe that media reinforces our belief and thought process.

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## Self-Help Groups: A Path for Economic Sustainability of Rural Women

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### ABSTRACT

*Self- Help Groups are the Small homogeneous groups of 10-20 people who came together to solve their common problems through mutual help. They promote small savings among group members. The savings kept into the bank, the fund known as SHGs. On the basis of their savings they can easily get loan from the banks. Mostly groups are women SHGs. SHGs provide them enough loans to start new business which became them economically sustainable and self independent. This paper is based on secondary data. The data have been taken from the various issues of Status of Microfinance Reports by NABARD in India. The paper will attempt to analyze the Region wise-status of Bank Loan disbursed to SHGs during past three years in India. North Eastern, Northern, Central, Western, Eastern, Southern are the regions which will be considered for bank loan position of SHGs in India during the past three years. The paper will also discuss about the objective of Self- Help Groups to making the women independent.*

**Keywords:** Self-Help Groups, Economic Sustainability, Rural Women, Savings Amounts etc.

### Introduction

In 2011, out of total population of India, females representing 48.46 per cent. Though women form half of the Indian population, their productive work is not officially allocated for one third of the total labour force. Women have traditionally been discriminate in their access to productive resources and have been denied ownership of land, cattle, trees, harvest and shelter. They have even been discriminated in access to credit and marketing facilities for their economic activities. Active participation of women in productive activities is necessary for all round development of the economy. Government launched policies/programme for women empowerment. Self-Help Groups are one of

the major initiatives by NABARD for empowerment/development of rural women. In rural areas majority of women are illiterate, lack of knowledge, resources and economic sustainability. But they have skill and working capability which built them economically, socially independent. SHGs movement in India will work on right direction to empower women in social, economical, cultural political matters.

**Sunil Subhash Patil 2013.** The rural poor especially women were organized into Self- Help Groups (SHGs) to enable them to take up viable economic activities on their own on a sustained basis with the support from bank loans and government subsidy.

**Rahul Sarania 2015.** SHGs provide loans to rural women to start new business, which make them economically independent and sustainable.

### **Objectives**

The main objectives of this paper are following:

1. To discuss the main objectives of SHGs for Economic Sustainability of rural women.
2. To study the Region wise Bank loan disbursed position for SHGs in India.

### **Research Methodology**

This Paper is based on secondary data. The data have been taken from Status of Microfinance Reports in India by NABARD, many articles from Journals, article in edited books, Sa-Dhan Reports etc.

### **Concept of Self-Help Groups**

SHG-Bank Linkage Programme was formally launched in the year 1992 a flagship programme by NABARD. The women 'Self-Help Group' (SHG) is an informal organization of up to 20 women from the poorer section of the village society, organized, owned, operated and controlled by the members, based on solidarity, reciprocity, common interest and resource pooling. These groups have common perception of need and impulse towards collective activity. These groups promote savings among members and used the pooled resources to meet the emergent needs of members including the consumption needs.

**Dr. Arjun Yallappa Pangannavar 2015.** A SHG is a small economically homogeneous affinity group of the rural poor voluntarily coming forward to save a small amount of money regularly, which is deposited in a common fund to meet the members' emergency needs and to provide collateral free loans

decided by the group. It now addresses the issues of poverty alleviation and empowerment of poor, health, nutrition and other support services especially women, in the rural areas of the country.

**M. Saravanan 2016. NABARD Defines SHGs as** “Small economically homogeneous affinity groups of rural poor, voluntary formed to save and mutually contribute to a common fund to be lent to its members as per the group members decision.” **(Status of Microfinance Report 2012-13)**

#### **Objectives of SHGs for Rural Women Empowerment**

- To create employment opportunities for rural women.
- To empower rural women.
- To improve the living standard of the rural people.
- To alleviate poverty among rural women.
- To provide them loans to start small scale business.
- To provide them knowledge and skill based training programme.
- To make easy access to institutional credit or micro credit facilities.
- To mobilize rural savings among group members.
- To make optimum utilization of rural resources.
- To engage rural women in development process of the country.
- To encourage regular saving habits among the members.
- To encourage the creation of productive assets.
- To aware them about the financial discipline.
- To build self confidence, self reliance, self believe among the members.
- To enhance the decision making power among the members.
- To make them capable in education, health, drinking water, housing, rural problems, family welfare and planning, sanitation etc.

**Table-1**

**Region-Wise Status of Bank Loan Disbursed to SHGs during the Past three year in India (SHGs number in Lakh, Amount in Rs. Crore)**

| <b>Regions</b>       | <b>2014-15</b>     |                              | <b>2015-16</b>     |                              | <b>2016-17</b>     |                              |
|----------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|
|                      | <b>No. of SHGs</b> | <b>Total Loans Disbursed</b> | <b>No. of SHGs</b> | <b>Total Loans Disbursed</b> | <b>No. of SHGs</b> | <b>Total Loans Disbursed</b> |
| <b>North Eastern</b> | 18791              | 15795                        | 26037              | 21969                        | 28961              | 28421                        |
| <b>Northern</b>      | 43848              | 42873                        | 38106              | 48298                        | 46567              | 57414                        |
| <b>Central</b>       | 109231             | 110909                       | 84282              | 119067                       | 82012              | 67958                        |
| <b>Western</b>       | 97341              | 117080                       | 112525             | 188632                       | 106825             | 148819                       |
| <b>Eastern</b>       | 351800             | 329602                       | 412576             | 349489                       | 497063             | 473172                       |
| <b>Southern</b>      | 1005227            | 2141972                      | 1158797            | 3001235                      | 1136692            | 3102332                      |
| <b>All India</b>     | <b>1626238</b>     | <b>2758231</b>               | <b>1832323</b>     | <b>3728690</b>               | <b>1898120</b>     | <b>3878116</b>               |

*Source: Status of Microfinance Report by NABARD (2016-17)*

Table-1 indicates the Region-Wise Status of Bank Loan Disbursed to SHGs during the past three years (2014-15 to 2016-17). During 2016-17, banks provided loans to 18.98 lakh SHGs as against to 16.26 lakh SHGs during 2014-15. The number of SHGs to whom loans were provided during the year 2016-17 was lower than previous year 2015-16 in Southern Region, Western Region and Central Region. In Southern Region about 30% of SHGs have availed bank loan during 2016-17. The high percentages of availing credit in Southern States are the reason behind the progress in number of SHGs loan disbursement amount in Southern Regions.

**(Status of Microfinance Report 2016-17)** Low credit linkage in North Eastern States and some priority States is a concern.

During 2016-17, about Rs. 38,781 crore of banks loan was disbursed recording a marginal increase (40.6%) in the total amount of loan disbursed by banks to SHGs as compared to Rs 27,582 crore during 2014-15. The quantum of loan disbursed to SHGs was lower (2016-17) than the previous year (2015-16) in Central and Western Region whereas other Regions witnessed thin rise. Institutional credit flow to SHGs was reported to be adversely hit by the demonetization of specified bank notes declared on 8 November 2016 and the resultant disruption in the loaning operations by financing institutions.

**(Status of Microfinance Reports 2016-17)** Despite this, the rise in number of SHGs credit linked and quantum of loan disbursed during the year is very positive for SHGs. SHG movement has enabled the women to get the social identity and leadership in decision-making and take a stand on the issues related to family as well as society. SHGs have battled against social evils like dowry, sale of liquor in villages, exploitation against women, etc. They have also put forth their demands before the appropriate authorities for road connectivity to villages, electricity, health and sanitation facilities, provision of drinking water, etc. SHGs were also seen fighting for the rights of not only the members and their families but also women in general, common interests of the settlements, etc.

**(Status of Microfinance report 2016-17)**

**Effort of NABARD for Promotion of Women SHGs in their Economic Sustainability during 2016-17**

- Financial Inclusion Fund' and 'Women Self Help Group Development Fund' were utilized during the year for various microfinance related

activities such as formation and linkage of SHGs/JLGs through SHPIs/JLGPIs, training and capacity building of stakeholders, livelihood promotion, studies, documentation, awareness and innovations etc.

- NABARD gave due recognition to training and capacity building of various stakeholders such as Bankers, NGOs, Government officials, SHGs, SHG Federations and trainers. During 2016-17 more than 4700 training programmes were conducted and about 1.75 lakh participants were trained.
- NABARD extended grant support to NGOs, Federations of SHGs, RRBs, NGO-MFIs, CCBs, PACS, Farmers' Clubs and Individual Rural Volunteers (IRVs) for promotion, nurturing and credit linkage of SHGs with the banks. These supports have proved better facility to be catalyst for the development of rural women.
- Village Level Programmes on SHGs were continued by NABARD with the support of banks and NRLM in 13 priority States. The aim was to foster better understanding of mutual requirements between banks, SHGs and SHPIs at ground level and to sort out issues like saving linkage, credit linkage and repayment, etc. at the ground level.
- The Centre for Microfinance Research (CMR) setup within Bankers Institute of Rural Development (BIRD) was renamed as Centre for Research on Financial inclusion and Microfinance (CRFIM) with broader mission and operational coverage during the year. The agency takes up research activities in the field of Microfinance and financial inclusion for facilitating policy initiatives and improvement in design and delivery system of microfinance.
- With a view to sensitizing the stakeholders of the SHGs programme, NABARD has been arranging training programmes and exposure visits to successful SHGs, to the functionaries of these institutions including financing banks.
- Skill development is an important tool for improving the employability and enhancing productivity of the working poor and thereby reducing poverty and exclusion. Rural poor women typically face difficulties or discrimination in accessing good quality training. Keeping the above in view, NABARD continued with Micro Enterprise Development Programme (MEDP) to nurture the entrepreneurial talents of members of matured SHGs to set up and run micro enterprises as a livelihood option in farm or non-farm sector. Around 15552 skill up-gradation training programmes have been conducted under this initiative covering about 4.40 lakh members of matured SHGs up to 31 March, 2017.

**Findings**

On the basis of the analyses and tables these are the findings of this paper-

- North Eastern region is recorded 54.12% growth rate in number of SHGs and 79.9% growth rate in loan disbursed amount from 2014-15 to 2016-17.
- Low credit linkage in North Eastern States and some priority States are the major cause behind the low performance of North Eastern region.
- Northern region has 6.20% growth rate in number of SHGs and 33.9% growth rate in loan disbursed amount from 2014-15 to 2016-17.
- Central region recorded negative growth rate about -24.9% in number of SHGs and -38.72% growth rate in loan disbursed amount from 2014-15 to 2016-17.
- Western region cope up with a positive growth rate of 9.74% in number of SHGs and 27.10% in loan disbursed amount from 2014-15 to 2016-17.
- Eastern region recorded a highest growth rate of 41.29% in number of SHGs and 43.55% in loan disbursed amount among all the states.
- Southern region has 13.07% growth rate in numbers of SHGs and 44.83% in loan disbursed amount from 2014-15 to 2015-16.
- The high percentages of availing credit in Southern States are the reason behind the progress in number of SHGs loan disbursement amount in Southern Regions.
- Demonetization is another big reason in low credit disbursement in central region as well as Northern region.
- Overall progress in number of SHGs is 16.71% and 40.60% in total loan disbursed which clearly indicates the economic sustainability of rural women.
- Objective of Self-Help Groups are clearly shows the empowerment of rural women in India.
- Increasing loan disbursement is assuring the economic sustainability of SHGs women in rural area.

**Conclusion**

In India, majority of our population live in rural area and women living in rural India have no idea about the importance of women's empowerment as they are not properly educated. Women have been playing an important role for the socio-economic development of the society since time immemorial. They are considered as the back bone of a family. But women in particular often bear the brunt of poverty and limited access to economic opportunities, including unfavorable financial access. Thus it is very important to empower the rural women through self-help groups for economic development. From

the study, it is found that micro finance through self-help group is helping the poor and upgrading women empowerment by making them financially strong. SHGs have increased their habit of savings and investment in some developmental activities. Self-Help Groups are the pilot project of NABARD especially for rural women. SHGs are continually made an effort for rural women to providing them easy loan facility skill development programme and Capacity building training programme. SHGs and Bank linkage programme developed by NABARD provide only savings and credit services and provision of insurance is almost nil or very less in the surveyed SHGs. The SHGs disburse loans for consumption and production purposes for the members. The member of SHGs perceives several benefits as economic independence, self confidence, provision of saving and freedom from debts.

### **Suggestions**

These are some suggestions of this paper-

- The Government policy makers should focus on the importance of small savings and loans provision for consumption as well as group formation.
- The Government policy can support the Self help groups (SHGs) in rural area by public investment in infrastructural development including education and health care.
- They should enact policy to regulate the quality of SHGs and could help in financial management of SHGs for responsible and sustainable growth.
- The rural people, especially the women community should be educated about the various financial services and products offered by various financial institutions and banks.
- The awareness schemes or advertisement programs should be enhanced, especially in the regional languages.
- Target base program for awareness of women should be shared by the state government in low performing regions.

### **Limitations**

The paper is based on secondary data. Only three years 2014-15 to 2016-17 are considered for the progress of SHGs and loan disbursed amount.

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## A Study of Banana Production in Tamil Nadu: An Overview

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### ABSTRACT

*Banana yields a good fibre. Cultivated varieties of banana also have a rich potential in this regard. Fibre production and paper making from fibre are commercial possibilities. Banana is used as a food for cattle and pigs in some countries. Banana forms one of the biggest single items in the international fruit trade. The researcher has wanted that to achieve a rapid increase in incomes a greater proportion of investment should be made in agriculture. The study focused on to understand the banana cultivation as a major fruits among the fruits in Tamil Nadu during 2010 – 2015, to know the area and production of banana in Tamil Nadu during 2010 – 2015. The researcher has found that the area cultivation, production and yield rate of all fruits has declining due several setbacks like lack of awareness among the farmers, lack of financial position, irrigational drawbacks and marketing hardliners etc., the government of Tamil Nadu policy makers to improve existing drawbacks should be mitigate and new technology and improved farm practices should train the farmers in Tamil Nadu.*

**Keywords:** *Banana Production, Fibre, Formers, Income, Marketing*

### Introduction

In an outset several resources constrain in Tamil Nadu, it has various faces several setbacks in agriculture as a result agriculture production has continuously decline trends. One of the important crops like banana play a pivotal role growth in banana cultivators in this article explains that area, production, productivities in Tamil Nadu. Banana yields a good fibre. Cultivated varieties of banana also have a rich potential in this regard. Fibre production and paper making from fibre are commercial possibilities. Banana

is used as a food for cattle and pigs in some countries. Banana forms one of the biggest single items in the international fruit trade<sup>i</sup>. Desai clearly indicates his article on “Role of Agriculture in Economic Development”, traced the importance of agriculture to Indian Economic Development. The researcher has wanted that to achieve a rapid increase in incomes a greater proportion of investment should be made in agriculture.

### Objective

- To understand the banana cultivation as a major fruits among the fruits in Tamil Nadu during 2010 – 2015,
- To know the area and production of banana in Tamil Nadu during 2010 – 2015,
- To examine the productivities of banana among the various fruits in Tamil Nadu.
- To suggest immediate measures should undertake to improve cultivation of fruits in banana to the cultivators and policy makers in Tamil Nadu.

The following table gives the area wise cultivation of various fruits in Tamil Nadu.

**Table 1**  
**The Cultivation Area of Fruits in Tamil Nadu 2010 -2015**

| Sl. No. | Fruits       | Area (in hectares) |                   |                   |                   |                   |
|---------|--------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|         |              | 2011               | 2012              | 2013              | 2014              | 2015              |
| 1       | Banana       | 107394<br>(27.55)  | 103107<br>(26.45) | 105775<br>(26.96) | 92463<br>(24.71)  | 91410<br>(24.80)  |
| 2       | Mango        | 139496<br>(35.78)  | 141140<br>(36.20) | 144509<br>(36.83) | 143177<br>(38.27) | 140367<br>(38.09) |
| 3       | Jackfruit    | 3058<br>(0.78)     | 2868<br>(0.74)    | 2936<br>(0.75)    | 2808<br>(0.75)    | 2896<br>(0.79)    |
| 4       | Pine apple   | 809<br>(0.21)      | 602<br>(0.15)     | 758<br>(0.19)     | 578<br>(0.15)     | 820<br>(0.22)     |
| 5       | Guava        | 7498<br>(1.92)     | 7717<br>(1.98)    | 8114<br>(2.07)    | 7730<br>(2.07)    | 8216<br>(2.23)    |
| 6       | Grapes       | 2463<br>(0.63)     | 2484<br>(0.64)    | 2356<br>(0.60)    | 2247<br>(0.60)    | 2244<br>(0.61)    |
| 7       | Orange       | 2067<br>(0.53)     | 1847<br>(0.47)    | 1965<br>(0.50)    | 1851<br>(0.49)    | 1715<br>(0.47)    |
| 8       | Lemon        | 7484<br>(1.92)     | 7794<br>(2.00)    | 8834<br>(2.25)    | 8290<br>(2.22)    | 8556<br>(2.32)    |
| 9       | Cashew nut   | 96710<br>(24.81)   | 97033<br>(24.89)  | 93302<br>(23.78)  | 92138<br>(24.63)  | 89021<br>(24.16)  |
| 10      | Other fruits | 22877<br>(5.87)    | 25270<br>(6.48)   | 23787<br>(6.06)   | 22837<br>(6.10)   | 23278<br>(6.32)   |
| 11      | Total Fruits | 389856<br>(100)    | 389862<br>(100)   | 392336<br>(100)   | 374119<br>(100)   | 368523<br>(100)   |

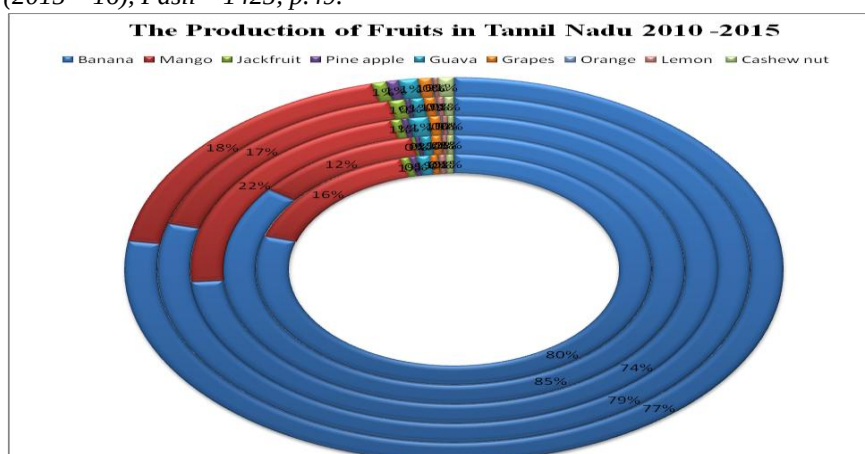
Source: Department of Economics and Statistics, Chennai, *Season and Crop Report of Tamil Nadu (2015 – 16), Fasli – 1425, p.47.*

In the above table clearly brings out that the area cultivation of 2011 to 2015, Mango fruits 35.78 per cent has a dominant role of crops as followed by other fruits like banana, Cashew nut, other fruits, lemon and guava, jackfruit, grapes and orange which is constitutes of 27.55 per cent, 24.81 per cent, 5.87 per cent, 1.92per cent, 0.78 per cent, 0.63 per cent, 0.53 per cent and 0.21 per cent respectively. The ensuing year of 2011 to 2015 has shows decline trends of share of fruits cultivation area, which it has clearly indicates that growth of all fruits crops continuously declined in Tamil nadu.

**Table 2**  
**The Production of Fruits in Tamil Nadu 2010 -2015**

| Sl. No. | Fruits       | Production (in Tonnes) |         |         |         |         |
|---------|--------------|------------------------|---------|---------|---------|---------|
|         |              | 2011                   | 2012    | 2013    | 2014    | 2015    |
| 1       | Banana       | 4800472                | 4505435 | 3909764 | 3840375 | 3725937 |
| 2       | Mango        | 957979                 | 626392  | 1189270 | 830291  | 894869  |
| 3       | Jackfruit    | 46231                  | 14139   | 34797   | 42312   | 33853   |
| 4       | Pine apple   | 33950                  | 18265   | 22875   | 14617   | 30082   |
| 5       | Guava        | 68298                  | 40473   | 66230   | 35870   | 46099   |
| 6       | Grapes       | 40227                  | 38057   | 38331   | 30216   | 31333   |
| 7       | Orange       | 3577                   | 3283    | 6167    | 4592    | 3747    |
| 8       | Lemon        | 33590                  | 17663   | 16366   | 17647   | 11646   |
| 9       | Cashew nut   | 39996                  | 25532   | 19730   | 26273   | 36561   |
| 10      | Other fruits | N.W                    | N.W     | N.W     | N.W     | N.W     |
| 11      | Total Fruits | N.W                    | N.W     | N.W     | N.W     | N.W     |

Source: Department of Economics and Statistics, Chennai, Season and Crop Report of Tamil Nadu (2015 – 16), Fasli – 1425, p.49.



In the above figure clearly indicates that the production of banana has a dominant as compared to other fruits. It has found that the area cultivation has

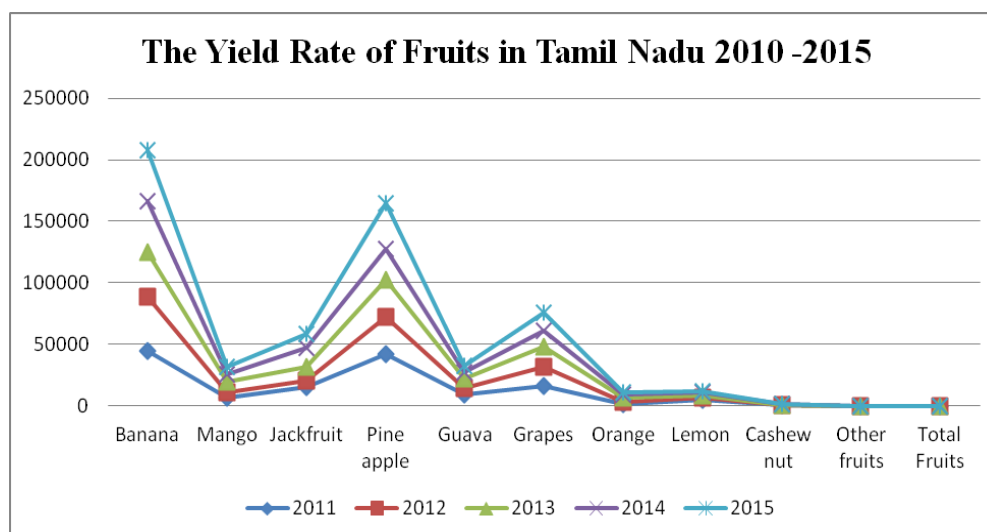
Mango but production in banana has high, therefore the policy makers must to keen and watch to improve the cultivation of banana in Tamil Nadu.

**Table 3**  
**The Yield Rate of Fruits in Tamil Nadu 2010 -2015**

| Sl. No. | 2010         | 2011  | 2012  | 2013  | 2014  | 2015  |
|---------|--------------|-------|-------|-------|-------|-------|
| 1       | Banana       | 44700 | 43695 | 36879 | 41534 | 40705 |
| 2       | Mango        | 6867  | 4438  | 8230  | 5799  | 6440  |
| 3       | Jackfruit    | 15117 | 4930  | 11852 | 15069 | 11691 |
| 4       | Pine apple   | 41965 | 30291 | 30178 | 25290 | 36685 |
| 5       | Guava        | 9109  | 5244  | 8162  | 4641  | 5652  |
| 6       | Grapes       | 16334 | 15321 | 16270 | 13448 | 13963 |
| 7       | Orange       | 1730  | 1777  | 3138  | 2483  | 2184  |
| 8       | Lemon        | 4488  | 2266  | 1853  | 2129  | 1361  |
| 9       | Cashew nut   | 414   | 263   | 211   | 285   | 411   |
| 10      | Other fruits | N.W   | N.W   | N.W   | N.W   | N.W   |
| 11      | Total Fruits | N.W   | N.W   | N.W   | N.W   | N.W   |

Source: Department of Economics and Statistics, Chennai, Season and Crop Report of Tamil Nadu (2015 – 16), Fasli – 1425, p.51.

The above table envisages that the yield rate has high in banana as compared to other fruits, instead off the yield rate has year by year going to decline trends. The government of Tamil Nadu of horticulture department must to take essential steps to improve the yield rate.



### Conclusion

The researcher has found that the area cultivation, production and yield rate of all fruits has declining due several setbacks like lack of awareness among the

farmers, lack of financial position, irrigational drawbacks and marketing hardliners etc., the government of Tamil Nadu policy makers to improve existing drawbacks should be mitigate and new technology and improved farm practices should train the farmers in Tamil Nadu.

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## Strategies for Sustainable Rural Development in India

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### ABSTRACT

*The term “sustainable development” is defined as development to achieve the needs of present generation without compromising future generation’s needs, while we are misusing the resources in a very vital manner, which is not good for the present generation and as well as to the future generation. ‘Future Generations’ is mainly related to the environmental problems of resource consumption and pollution and their distribution over long time horizons. In this paper we focus on strategies for sustainable development which are necessary for survival of and our present generation as well as coming generation. And also emphasise on how to improve the quality of life of both current and future generations, while safeguarding the earth’s capacity to support life in all its diversity.*

**Keywords:** Strategies, Sustainable. Rural, Development, environmental

### Introduction

Sustainable development, at present time is a most concern phenomena. Globally every country including most developing country like India and China thinks very much about it because they realize that their future generation must be suffer to lack of resources which is obviously most central to survive. This phenomenon comes after Second World War. The concept of sustainable development is not related only future generation but also with the present generation. Firstly it is important to know the conceptual meanings of sustainable development. It is a way of thinking by which we can secure our present and future generation. The right to development means the right to improvement and advancement of economic, social, cultural and political conditions that can be improved the global quality of life. Improvement of global quality of life means the implementation of changes that ensure every

person's life of dignity and at same time citizens realize their human rights. These changes must include the eradication and alleviation of wide spread conditions of poverty, unemployment, and inequitable social conditions. In this context the statement of Mrs. Indira Gandhi would like to quote in which she was emphasized on environmental security for sustainable development. At the UN Conference on Human Environment at Stockholm in 1972 she said that, the removal of poverty is an integral part of the goal of an environmental strategy for the world. Sustainable development ensures the well-being of individual by integrating social development, economic development, and environmental conservation and protection. The most frequently used definition of sustainable development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' The meaning of needs is something that is necessary for the organism to live a healthy life. It is necessary for the sustainable development that the policies and technologies should be green so that environmental ability meets present and future generation in equal manner. It was coined in 1987 by the United Nations-appointed World Commission on Environment and Development, also known as the Brundtland Commission after its chair, former Norwegian Prime Minister Gro Harlem Brundtland.

### **Chronological Milieu of Sustainable Development**

In the mid-20th century world community highlights four points of collective desire and aspiration of the people - peace, independence, development and environment. After this first time Rachel Carson represented the conflict between economic development and environment in his book 'Silent Spring' in 1966. D. H. Meadows in his book 'Limit to Growth' centralized the attention on environment degradation occur due to development in 1972. This report challenged the idea of progress that compares the present with the past, and considers the future an endless possibility for further growth and improvement, on the grounds that it failed to acknowledge the obvious truth that resources are finite, and hence growth dependent on resources cannot be endless. The implicit message of The Limits to Growth was that growth needed to be replaced with no growth. UNEP introduced in 1972 in Nairobi for thinking about to environmental problems. The World Conservation Strategy published in 1980 by the International Union for the Conservation of Nature and Natural Resources (IUCN), and Our Common Future (also known as the Brundtland Report after the chairman of the committee), published by the UN appointed World Commission on Environment and Development

seven years later, provided the answer as “sustainable development”– and thus the concept of sustainable development was born. The United Nations Conference on Environment and Development, held in Rio de Janeiro in June 1992, was a remarkable event. The heads of 179 states and representatives of numerous countries, international organizations and non-governmental organizations were in attended the conference. This conference demonstrated that humanity could no longer treat the environment separately from economic development. The conference led to the acceptance of a world action plan called Agenda 21, an action programme spanning the next 100 years. The Rio Declaration contains the basic principles that must underline future state decisions and policies. After ten year of Rio de Janeiro summit Johannesburg Summit 2002 held in Johannesburg. The focus of this summit was on the need to remove the barriers to sustainable development in modern societies.

Alleviate poverty and disease, manage natural resources rationally, and promote responsible consumption and production. The main emphasis was to use the benefits of globalization to establish a balance between development and environment. Challenges of sustainable development the challenges of sustainable development and its consequences are clearly visible. It is only invisible if we not want to see. Population is a major challenge for the sustainable development. In the beginning of the 21st century the population of the Earth reached 6 billion, and is expected to level out between 10 and 11 billion over the next 50 years. The basic challenges will be shortages of drinking water and arable land for food production. Poverty is another major challenge because almost 25% of the world’s population lives on less than USD 1 per day. Inequality continues to be a serious obstacle to sustainable development with the number of people suffering from undernourishment. The fall of food prices over the past 30 years may have contributed to increases in consumption, but in many regions of the world arable terrains are limited, and the creation of new ones has a destructive effect on the remaining ecosystems.

In the future, the growth of food production should not come at the expense of nature. By 2010 the current step of biodiversity loss should be significantly slowed. The shortage of drinking water in many regions of the world is a major barrier to sustainable development. It is expected that, at the current rate of development, every second person will suffer from water shortage by the year 2025. Human health is also an obstacle in sustainable development. In many cases, deaths in developing countries are avoidable. Humanity should direct more attention and money in the coming years to the struggle against diseases. The imminent task is to reduce the death rate among children

under five years of age by two-thirds, and the death rate of young mothers by 75% by 2015. Consumption of energy is a major challenge for the sustainable development. Consumption of all forms of energy is continually rising. The improvement of access to reliable, sustainable and environmentally friendly energy sources and services, as well as the creation of national programmes for energy effectiveness, is a particularly important task for the next 10-15 years. Deforestation is particularly great challenge before the sustainable development. The world's forests diminish mainly due to expansion of agriculture. In the coming years, improving the recovery and management of the forests will be of utmost importance.

Petrol consumption is constantly rising. The Summit emphasized the need to realize the decisions of the Kyoto Protocol for reaching an agreement on emissions norms for greenhouse gases in developed countries. Strategies for Sustainable Development The conceptual meaning of sustainable development is not to create an obstacle in development process but this concept belongs to how we utilize our resources so that an inter-relationship can be established among present and future generation. To attain sustainable development many probable strategies can be useful. Input Efficient Technology can be reducing the exploitation of resources. So this technology may good for sustainable development. Via Using of Environmental friendly Sources of Energy, such as LPG and CNG which are eco-friendly fuel, we can reduce the greenhouse gases from the earth. Delhi Transport Corporation's initiative to CNG Buses in Delhi is the one of the best effort to reduce CO<sub>2</sub> and other harmful gases. Government should pay attention on Integrated Rural Development Programmes. Through this the burden and interdependency on cities for employment can be decrease. To focus on renewable sources of energy like solar and wind for energy needs.

### **Conclusion**

Sustainable development is a vision and a way of thinking and acting so that we can secure the resources and environment for our future generation. It will not be brought about by policies only — it must be taken up by society at large as a principle guiding the many choices each citizen makes every day, as well as the big political and economic decisions that affect many. It is clear that environmental degradation tends to impose the largest costs on those generations that are yet to be born. Future generations are disadvantaged with regards to present generations because they can inherit an impoverished quality of life, share condition of structural weakness in having no voice and

representation among the present generation and so their interests are often neglected in present decisions and planning while it is very much needful that we think about our generation. We can only improve sustainable development when it will put an emphasis on involving citizens and stakeholders.

Ultimately, the vision will become reality only if everybody contributes to a world where economic freedom, social justice and environmental protection go hand in hand, making our own and future generations better off than now.

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## **Tribal Women Health, with Reference to Kandhamal District**

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### **ABSTRACT**

*About a half of the autochthonous people of the world with about 635 tribal groups and, Sub groups including 75 primitive tribes live in India. The state of Orissa occupies a unique position in the tribal map of India having 62 scheduled tribes including 13 primitive tribes. Odisha is the one of the most fascinating ethnographic State in India. The district Kandhamal [District of Kandha Tribe] ranked as one of the most back ward district amongst 69 identified most back ward district of Independence India. Almost 66% of the land area of the district is covered with dense forest and towering mountains which provide shelter to its tribal inhabitant. Inhabitants here mainly depend on gathering forest product and shifting cultivation throughout the year which is their occupation and profession as well. It is observed that most of the Tribal people are highly prone to diseases by mosquito bite and impure water and so on.*

*The reason behind this misery is as follows: the Poverty, illiteracy [Lack of guidance and awareness], ignorance to disease, poor sanitation and lack of safe drinking water, superstitions [traditional beliefs] etc. malnutrition, poor maternal and child health services and neffective coverage of national health and nutritional services. In spite of the tremendous advancement in the field of preventive and curative medicine, the health care delivery services in tribal communities especially in Orissa are still poor and need amelioration and strengthening with sustenance on the guidelines suggested to achieve the targeted goals of health for all in India.*

**Keywords:** Poverty, Illiteracy, sanitation, Superstitions, Malnutrition

## **I. Introduction**

The research is basically carried out to identify potential health condition of tribal women with special reference to KANDHA tribal women, inhabitant of KANDHAMAL district. The widespread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary living conditions, poor maternal and child health services and ineffective coverage of national health and nutritional services have been traced out in several studies as possible contributing factors to dismal health conditions prevailing among the tribal population in India. In this article, the author focuses on certain interacting factors like the infant mortality rate, life expectancy, genetic disorders, sexually transmitted diseases, nutritional status, forest ecology, child health and health care practices which are generally responsible for determining the health status and health behavior of tribal communities.

## **II. Objective of the Study**

The objective of the study is identify potential health condition of tribal women with special reference to KANDHA tribal women, inhabitant of KANDHAMAL district and populate those areas of dark side putting light to remediate and eradicate.

## **III. Related Works**

**The Poverty.** Kandhamal is endowed with rich natural resources in the form of vast mineral deposits, forest, fertile land, plentiful surface and ground water resources, long coast line, and picturesque tourist potential. But, such resources have not been exploited adequately for income generation activities. Agriculture, horticulture, forest produce and micro enterprises are the main sources of livelihood in Kandhamal. Agriculture in the district is characterised by small land-holdings, upland terrain, traditional cultivation practices, limited irrigation, poor water conservation measures, low productivity, limited crop diversification and low yields of food grains. Though the district economy has diversified over the years, 69.44 percent of the work force (cultivators and agricultural labourers) still depend on agriculture and allied sectors. Agriculture and animal husbandry sectors contributed 31.74 percent of the Gross District Domestic Product in 2004-05 which is high in comparison to the share of these sectors in GSDP at the state level. Land use and landholding patterns indicate that the pressure is rising on cultivable land due to less available land for agriculture (less than 18% of total area) and small landholding (86.58% farmers belong to marginal and small categories). The

extent of irrigation is only 13.57 percent against the State average of 33.78 percent. The main crops in the district include paddy, maize, Niger, vegetables and turmeric. The inhabitants here depend on the forest products and due to poor economic condition the good health of the tribal women is becoming nightmare.

***Illiteracy [Lack of guidance and awareness].*** Average literacy rate of Kandhamal in 2011 were 64.13 compared to 52.68 of 2001. If things are looked out at gender wise, male and female literacy were 76.93 and 51.94 respectively. For 2001 census, same figures stood at 69.79 and 35.86 in Kandhamal District. Total literate in Kandhamal District were 399,786 of which male and female were 233,900 and 165,886 respectively. This figure clearly indicates that the literacy rate in women are comparatively too less than male. In addition to this tribal Kandha women are not aware of healthcare and medicines, still they are found to be in the traditional treatment with respective off their heath. In the dense forest areas there are lack of such healthcare institutions or organizations who can bring awareness among the Kandha tribal women, which in turn leads to lack of poor women health.

***Ignorance to disease.*** As per our research it has been found that there is high illiteracy rate in Kandha tribal women. They are less health conscious along with their child health. Whenever there will be any encounter of disease they will keep ignoring the disease believing that it will be get cured automatically and naturally. By some means if they cured from that disease when they encounter the same once again they think that it will be get cured the same way as it was earlier, but the worst case this is not happening and in turn leading to the worst health condition and death.

***Poor sanitation and lack of safe drinking water.*** Kandhamal district ranks 5th in size among the districts of Orissa with a total geographical area of 8021 sq.km. The district has 2 Subdivision and 12 administrative blocks. The Phulbani subdivision lie at a height of 518m above mean sea level whiles the Balliguda subdivision lie at a height if 300-1100m above mean sea level. Chemical analysis of different parameters from the water samples collected states from the national hydrograph stations, during April. The collected water samples were analysed in the chemical laboratory of south Eastern Region as per the standard methods available in literatures. The Ph and electrical conductance (EC at 25.C) of the water sample were determined by the

concerned instrument after calibration. The fluoride, iron and nitrate content of the water samples were determined spectrometrically. In the use of safe drinking water as well as irrigation, the district ranks 29th in the state. In dense forest Kandhamal district there is lack of pure drinking water. the tribal women are collecting the drinking water from the river side well and consume which are containing composed leaves falling from the trees and other animal wastes as well in worst cases.

***Superstitions [traditional beliefs] etc.*** Tribal communities are mostly forest dwellers. Their health system and medical knowledge over ages known as 'Traditional Health Care System' depend both on the herbal and the psychosomatic lines of treatment. While plants, flowers, seeds, animals and other naturally available substances formed the major basis of treatment, this practice always had a touch of mysticism, supernatural and magic, often resulting in specific magico-religious rites. Faith healing has always been a part of the traditional treatment in the Tribal Health Care System, which can be equated with rapport or confidence building in the modern treatment procedure. For example, the doctor priests of the Saora tribe utilize several herbs and roots in conjunction with their magico-religious rites in Orissa. Health problems and health practices of tribal communities have been profoundly influenced by the interplay of complex social, cultural, educational, economic and political practices. The study of health culture of tribal communities belonging to the poorest strata of society is highly desirable and essential to determine their access to different health services available in a social set up. The common beliefs, customs, traditions, values and practices connected with health and disease have been closely associated with the treatment of diseases. In most of tribal communities, there is a wealth of folklore associated with health beliefs. Knowledge of folklore of different socio-cultural systems of tribal's may have positive impact, which could provide the model for appropriate health and sanitary practices in a given eco-system. Hence, it is required to change the health services to conform to health culture of tribal communities for optimal utilization of health services.

Whenever there will be any encounter of disease they will keep ignoring the disease believing that it will be get cured automatically and naturally. By some means if they cured from that disease when they encounter the same once again they think that it will be get cured the same way as it was earlier.

**Malnutrition.** Though Kandhamal district is rich of natural resources, the foods here are not nutritious and the foods are not well processed. The tribal women have the food, which are heavy but containing less nutrition, carbohydrates, vitamins which are base of poor women health. They are eating rice, pulses, maize, natural root processed foods in their daily diet. They are unable to identify nutritious food for their health rather they are adaptive to traditional food which are poor in nutrition.

**Poor maternal and child health services.** Kandhamal district has held on to its top position in Infant Mortality Rate (IMR) in the state with the current figure standing at 82, 26 more than the state average. Poor women health awareness and lack maternity care increases the child death along with mother.

***Ineffective coverage of national health and nutritional services***

There are fourteen hospitals:

- District Headquarters Hospital, Phulbani
- Sub Divisional Hospital, Balliguda
- Community Health Centre, Subarnagiri
- Community Health Centre, Tumudibandha
- Community Health Centre, Barakhama
- Community Health Centre, Daringbadi
- Community Health Centre, K.Nuagaon
- Community Health Centre, Raikia
- Community Health Centre, G.Udayagiri
- Community Health Centre, Brahmanpad
- Community Health Centre, Tikabali
- Community Health Centre, Gumagarh
- Community Health Centre, Phiringia
- Community Health Centre, Khajuripada

In addition to the above there are several other NGOs which are working parallel to bring awareness with respect to women health. Still the effectiveness or successfully implementation of these health plans depends on the tribal women participation and their interest towards being healthy and good health practice.

**IV. Conclusion and Future Work**

The scheduled tribes are at different stages of social, cultural and economic development. The cultural pattern varies from tribe to tribe and region to

region. The economic life of the tribals is specific in nature. Based on the manner in which the tribals primarily and distinctly make their living, the Indian tribals can be classified into seven groups. Keeping the current research more advanced interactive research will be carried out to add more value to this paper.

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## Impact of Individualized Instruction on the Learners Suffering from Dyslexia and Dysgraphia

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### ABSTRACT

*The study gives an account of the academic activities undertaken by a Non-Govt. Organization i.e. Ruchika Social Service Organisation (RSSO), Bhubaneswar, for the cause of the differently abled children. The researchers found that steps were taken for remedial teaching for the differently abled children by the said organization. After administering diagnostic test (Pre-test) on 100 children followed by Remedial Teaching on the basis of their needs the researchers. In order to bridge the learning gap among the learners, the Researchers designed modules to deal with 18 learners who fell under the category 'Learning Disability'. It was a two tier process of experiment. At first selected Resource teachers were oriented to transact the module. Then they taught to the students with Learning Disabilities. After one month intervention based on the module the students were administered a Post-test. Then the results of the pre-test and post-test were compared and it was found that there was substantial improvement in the achievements of the learners in English.*

**Keywords:** *dyslexia, dysgraphia, individualized instruction, adaptive technique.*

### Introduction

Children differ individually in the school but they read a community life with fellow feelings and brotherhood. In a democratic country it should be the motto of every school to inculcate the feeling of oneness among the learners of a school so that discrimination should be wiped out from the mind of the children and attitude sharing will be developed in every child. The mandates of SSA aim at mainstreaming all the children irrespective of caste, creed and race and socio-economic status up to the age 14 years. Inclusion involves

students attending the same schools as sibilings and members in general education class rooms with chronological age appropriate classmates having individualized and relevant learning objectives and being provided with the support necessary to learners' special education needs and related services. It does not mean students never receive small group instruction or that students are in general education classes to learn the core curriculum only (York, Kronbers and Dovie-Exceptional children, 1972). "Inclusive education means that all students are provided the support and opportunity they need. Every effort will be made to meet the individual needs of all students through a diverse and accommodating curriculum in a regular education environment.

Collaborative planning, shared ownership and common responsibility for the education of all students will foster a climate of acceptance and support with the family and community".

Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995:

The landmark legislation in the history of special education in India is the Persons with Disabilities (Equal opportunities, protection of rights & full participation) Act, 1995. This comprehensive Act covers seven disabilities namely blindness, low vision, hearing impaired, locomotor impaired, mental retardation, leprosy cured and mental illness. Chapter V (Section 26) of the Act, which deals with education, mentions that the appropriate Governments and the local authorities shall

- Ensure that every child with a disability has access to free education in an appropriate environment till he attains the age of eighteen years.
- Endeavour to promote the integration of students with disabilities in the normal schools.
- Promote setting up of special schools in governments and private sector for those in need of special education in such a manner that children with disabilities living in any part of the country have access to such schools.
- Endeavour to equip the special schools for children with disabilities with vocational training facilities.

Recognizing that teachers need to be sensitized to the needs of CWSN, inclusive education has been incorporated as a part of the 20-day mandatory training of SSA teachers to make them aware of the concept, meaning and

importance of inclusion. It was in force till 2010. States are also running separate classes to equip teachers with class room management skills. So far, states have given training to 16.37 lakh teachers through in-service training and 4.86 lakh teachers through 5-7 day training. Researchers as faculty of DIET has conducted a number of training programmes and attended cluster level meetings. It is a demand of the teachers that they have attended short term orientations on IED (Integrated Education for Disabled) organised by the District Project Coordinator on behalf of SSA, but it was felt that the learners need specific training category wise as envisaged in the RTE Act 2009 mentioned in the document.

### **Review of related literature**

Gupta, S.K, et.al (1996) conducted a study on the incidence and nature of learning disabilities at the end of class II to evolve preventive strategies. The major findings of their study were the incidence of learning disabled children in Grade III was found to be 7% in case of government primary schools. All children displayed deficit in language (Hindi), particularly in written language, oral reading and recognition of words and sentences.

### **Strategy of the present study**

The present study focuses on dyslexia and dysgraphia with a small sample of 18 students which helped the researchers to give keen attention and develop individualised language programme for the learner to eliminate their deficits. Again due focus was given on adaptation of curriculum and relevant teaching learning materials, phonic card, worksheets, picture cards, word cards, sentence cards, to facilitate individualized instruction.

### **Conceptual policy and legal Framework**

The concept of inclusive education and how it applies to children and youth with disability is discussed. While explaining inclusive education we will differentiate it from special and integrated education. Since, we are concerned particularly with children and youth with disability here, we will critically state the various approaches undertaken to define disability. We will finally give the important national and international level policy and legislative frameworks supporting the inclusion of children and youth with disability in learning.

### **Inclusive Education**

Over the years, the term ‘inclusive education’ has come to replace the term ‘integrated education’. Many people working in the field of education in our country consider these two terms to be meaning the same thing. They

understand it as only a change in terminology and nothing else. In their words inclusive education means “including children with disability in regular classrooms that have been designed for children without disability”.

We must understand that the term inclusive education means much more than this. It refers to an education that accommodates all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. The range of challenges confronting the school system while including children with diverse abilities and from diverse backgrounds have to be met by creating a child-centered pedagogy capable of successfully educating all children. An inclusive class may have amongst others, children with disability or gifted children, street or working children, children from remote or nomadic populations, children belonging to ethnic, linguistic or cultural minorities or children from other disadvantaged or marginalized groups.

Inclusive education is restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in their locality. It has the following characteristics:

### **Inclusion in Education**

- Inclusion in education involves the process of increasing the participating of students in, and reducing their exclusion from, the cultures, curricula and communities of local schools.
- Inclusion involves restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in their locality.
- Inclusion is concerned with the learning and participation of all students vulnerable to exclusionary pressures not only those with impairments or those who are categorized ‘having special educational needs’.
- Inclusion is concerned with improving schools for staff as well as for students.
- A concern with overcoming barriers to the access and participation of particular students may reveal gaps in the attempts of a school to respond to diversity more generally.

### **Objectives**

- ❖ To identify the learners suffering from Dyslexia and Dysgraphia.
- ❖ To develop strategies for helping the learners suffering from Dyslexia and Dysgraphia.
- ❖ To study the impact of individualized instruction in solving the reading and writing problem of the learners.

**Operational definition of learning disability**

Learning disability is a disaster that affects the student's ability either to interpret what they see and hear or to link information from different parts of the brain despite an average or above average intellectual capacity. These limitations can show up in many ways e.g. as specific difficulties with spoken and written language coordination, self control or attention. Such difficulties extend to school work and can impede the process of learning to read or write or to do arithmetic.

Dyslexia means disorder in reading and dygraphia means writing problems with the learner which affect their progress in achieving language competencies.

**Delimitation**

The study was delimited to the following aspects  
Learners suffering from Dyslexia and Dysgraphia

**Sample**

10 students suffering from dyslexia and 8 students suffering from d dysgraphia were selected purposively.

**Design:** Single group, pre-test and post test design

**Aspects of pronunciation**

- ❖ Articulation
- ❖ Juncture
- ❖ Stress
- ❖ Rhythm
- ❖ Intonation

**Errors in the form of writing**

- ❖ Letter formation
- ❖ Size (disproportionate or inadequate)
- ❖ Margin
- ❖ Neatness in writing
- ❖ Speaking
- ❖ Punctuation
- ❖ Handwriting
- ❖ Overall appearance
- ❖ Space between lines
- ❖ Line above the letter/words
- ❖ Quality of line

- ❖ **Omissions** – Omissions occur in the final part of whole class of positive sound detected in three areas omission of a vowel, consonant or nasal sound.
- ❖ **Substitutions** – Substitution relating to one nasal sound, phoneme for the target phoneme.
- ❖ **Distortive allophone** – A sound is accepted but not rightly substituting one vowel for another and one consonant for another.
- ❖ **Addition** – Adds extra sound which is not needed.

#### Errors in the content of writing

- ❖ Structural errors – grammatical
- ❖ Defective compositional expressing of all variety.
- ❖ Incomplete answer
- ❖ Wrong answer
- ❖ Weak answer
- ❖ Reinforced structure omitted when it could be used.
- ❖ Variety lacking in sentence pattern
- ❖ Variety missing in composition pattern, in writing letters, stories, dialogues, reports, essays.
- ❖ Weak and defective essays.

#### Sample of errors noticed

| Sl. No | Errors                                                    | Specific examples                                                    |
|--------|-----------------------------------------------------------|----------------------------------------------------------------------|
| 1      | Pronounces word wrongly                                   | Reads school as “ecool”<br>Reads cuckoo as “cook”                    |
| 2      | Could not comprehend the passage                          | After listening a story fails to respond to wh-type of questions.    |
| 3      | Couldn't locate a specific information given in a passage | He didn't find out the name of a scientist that a passage contained. |
| 4      | Couldn't give space between two words                     | He wrote “inthemorning”                                              |
| 5      | Couldn't arrange letters to make a meaningful word        | “bdrige”, “stele”                                                    |

#### Individualized language programme

- ❖ One or more instructional objectives
- ❖ Pre-test (direction for obtaining)

- ❖ List of learning activities or materials
- ❖ Self-test to aid the pupil in monitoring his learning progress
- ❖ Post test (directions for obtaining)

**Duration of experiment:** One month

**Statistical techniques used in the study**

- ❖ The obtained data were analysed by using appropriate statistical techniques such as mean, standard deviation and t-Value to arrive at scientific conclusions.

**Analysis and Interpretation:**

**Table-1**

*(shows the pre-test and post-test score analysis of the V-std children in relation to dyslexia)*

| Name of the test | N  | Mean | S.D. | t-Value | Level of significance |
|------------------|----|------|------|---------|-----------------------|
| Pre-test         | 10 | 8.2  | 2.2  | 1.94    | 0.01                  |
| Post test        | 10 | 10.4 | 2.4  |         |                       |

The above table shows that the performance of the students suffering from dyslexia has undergone improvement due to individualized instruction and the special learning materials designed for them. There is a difference of 2.2 between the post test mean achievement score and pre test mean achievement score. The t-value is found significant at 0.01 level. Thus the individualized intervention proved effective in case of the students suffering from dyslexia.

**Table-2**

*(shows the pre-test and post-test score analysis of the v-std children in relation to dysgraphia)*

| Name of the test | N | Mean | S.D. | t-Value |
|------------------|---|------|------|---------|
| Pre-test         | 8 | 8.1  | 2.6  | 7.66    |
| Post test        | 8 | 12.4 | 3.2  |         |

The above table shows that the performance of the students suffering from dysgraphia has undergone improvement due to individualized instruction and the special learning materials designed for them. There is a difference of 4.3 between the post test mean achievement score and pre test mean achievement score. The t-value is found significant at 0.01 level. Thus the individualized intervention proved effective in case of the students suffering from dysgraphia.

### **Findings**

1. The mean of the Pre-test was 8.2 and Post-test was 10.4. The 't' value was 1.94, found to be significant at 0.01 level which was found from the results of the experiment.
2. It is effective because of the recurrent individualized instruction extended to the learners adapting the curriculum, using innovative methods and relevant materials for the learners suffering from dyslexia and dysgraphia.
3. Appropriate Teaching Learning Materials were developed in English which were accepted because of the quality in view of its learner friendly attributes.
4. Co-operative learning and peer learning techniques were in practice which helped in improving the standard of the learners. Corrective exercises used in respect pronunciation and spelling games through audio CD and print materials helped the learners a lot.

### **Educational implications**

- ❖ All the children can be involved in this method for providing Remedial Teaching.
- ❖ This strategy can help the primary school teachers to enhance the achievement level of the children with special needs .i.e. learners in English suffering from Dyslexia and Dysgraphia.
- ❖ This strategy makes children fearless and joyful.
- ❖ Teachers can also utilize this individualized instruction strategy for providing Remedial Teaching to slow learners and children with special needs in multi-grade context.

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## Teachers' Unions in Telangana State: A Historical Perspective

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### ABSTRACT

*Publicly funded elementary education in India remains an issue of serious concern despite encouraging progress in enrolment in the past two decades. Educationists, NGO's, think tanks extensively talk about the various reforms and measures required to extend the access and enhance the quality of primary education. However, the perspectives of teachers and their unions have received little attention in these discussions. In this paper, I begin with briefly discuss the role that teachers unions' play in the sphere of education. Further, this paper provides an account of their perspectives pertaining to the challenges to education in India through interaction with leaders of teachers' unions concerning primary/elementary education, some of which are based on national level and others in the Telangana state. On the basis of these and other activities pursued by them, I have tried to show what their major concerns, thrusts, complaints and suggestions are in view of the current status of education India. Finally, I analyze these concerns and establish that these unions focus only on inputs, and are barely working to mitigate the real challenge of education in India-poor learning outcomes.*

**Keywords:** *Teachers' Associations, United Teachers Federation, Educational Reforms etc.*

### Introduction

The origins of unions' existence can be traced back to the 18th century, when the rapid expansion of industrial society attracted women, children and immigrants to the work force in large numbers. The pool of unskilled and semi-skilled labor spontaneously organized themselves in fits and starts throughout its beginning, and would later become an important place for the development of trade unions. Trade unions were also endorsed by the Catholic Church towards the end of the 19th Century. Today, we live in a world where

workers have assumed great importance. The employers have started to realize the importance of workers. The employees too have started to form Trade Unions to protect their interests. Bosses around the world have recognized that the best way to resolve issues is by way of dialogue. The employees have realized that to protect themselves from exploitation, unity is very important. This is one of the reasons why trade unions have become so important today.

Teachers' unions in India have a long history-longer than that of trade unions. These unions can be traced all over the country. They may operate at national or local level, consist of members ranging from 100 to 23 lakh, and vary in their ideologies to an extent. Women Teachers' Association (1890) in Madras was the first teachers' union in the country, followed by Madras Teachers' Guild in 1895, representing both male and female teachers. South India Teachers' union in 1909 was the first federal organization. In North India, Uttar Pradesh was the first state to have established its unions in 1921. Soon, this movement spread to other states and provinces. The first union operating at the national level was All India Federation of Teachers' Association (1954), encompassing all the regional teachers' associations of the country. Trade unions also sometimes act as representatives of workers in case of legal matters the rights of the employees are better protected. For example, they cannot be unjustly removed from work since the individual rights of workers are better protected and well represented, they tend to be motivated.

### **Defining Teachers' Union**

A trade union is an organization or a group that workers join so that they can have their interests and goals well represented. Therefore, a teachers' union is an organization of teaching professionals who work to protect their rights and interests. It's as simple as that. Unions engage in an activity known as collective bargaining, which is a negotiation between employers and the union over a contract that determines working conditions, compensation, and benefits. If an agreement cannot be reached, a union can strike, or cause a mass work stoppage by refusing to work. The ability to present a unified front in collective bargaining is probably the single greatest strength of a union. It is also important to note that membership in a union isn't free. Unions often, as part of the collective bargaining process, negotiate to deduct a small amount from members' salaries every paycheck to cover their union membership.

### **Origin and Development of Teachers' Organizations in India**

Teachers' unions have been in existence for more than one-hundred and fifty years. State teachers' associations began organizing in the 1850s and the first

national teachers' organization, aptly called the National Teachers' Association, was created in 1857. These early groups were formed to serve as professional and political advocates for teachers, helping educators to elevate the profession of teaching and expand and strengthen public education in America. In later years, teachers' unions also took on the role of collective bargaining agent, representing teachers in negotiations with school district officials. The American Federation of Teachers (AFT) was formed in 1916 with the expressed intent of representing the interests of classroom teachers in bargaining negotiations and other interactions with district and state administrators, and the first public employee collective bargaining law passed in 1959. The first collective bargaining agreement between a teachers' union and district administrators was signed in 1962 in New York City, the result of a teachers' union strike two years earlier. In the decades since, teachers' unions have gained in stature, both in terms of size and resources. The two major teachers' unions, the National Education Association (NEA) and the AFT, today boast a combined membership of over 4 million educators and education support providers, and spend more than any other public sector union on federal lobbying activities.

Historically, many educational policymakers and researchers have viewed efforts of teacher unions as antithetical to school reform. Most teacher union activity has involved aggressive efforts to raise teacher salaries, improve teachers' working conditions, and protect teachers' rights, even if this entailed protests that limited or suspended teachers' work with students. Although school improvement has been on the agenda of the UTF and the PRTU and teachers unions for decades, most observers, and union leaders themselves, have recognized that there has been a tension between fighting for rights that are most beneficial to its members and pressing for reform that is most beneficial for students. In the 1990s both national unions substantially increased their engagement in straight efforts to increase student achievement by improving instructional strategies and school conditions that support good teaching and student learning. These initiatives which have been dubbed the "new unionism"—have been motivated by demands of newer members, by the recognition that effective teaching requires new structures and relationships in schools, and by perceived needs to build public and political support for the unions.

**The objective is as given below**

- Promote their members' interests through activities such as political and social action, collective bargaining, publication, conferences and training.

- They foster the welfare and security of their members.
- Facilitate information exchange and generate and promote codes of conduct.
- Provide an opportunity for teachers to participate in the affairs of the profession.
- To it as liaison between teachers and government. Teachers' organizations vary in terms of their membership, internal governance, goals and activities, and effects.
- These variations are found among nations, among organizations within nations, and over time within individual organizations.

### **Teachers Unions as Bargaining Agents**

Teachers Unions' role as the bargaining agents for their members allows and/or requires them to negotiate with local district school boards and administrators and results directly in the collective bargaining agreements (CBAs, or contracts) that govern district and school operations. Given the importance and visibility of this role, there has been relatively little work that explores the contents of CBAs. Even less attention has been given to the relationship between these CBAs and important district outcomes such as student achievement and district spending. Work that does examine CBAs does so in an attempt to push beyond the studies that explore relationships between indicators of union strength or existence to better understand *how* unions impact outcomes via these important policy documents.

### **Effect on Educational Reform**

There is little research that systematically examines the effects of union actions on improving instruction and on school reform more generally. It is clear however, that certain policies frequently advocated by would be reformers would not be as far along as they are now without teacher union cooperation and leadership. These steps include peer review of teacher competence, more robust induction programs, job embedded professional development, and performance based pay. It is also clear that the greater emphasis on school improvement and student achievement that has characterized teacher union priorities in the late twentieth century is unlikely to be reversed. This redirection is being institutionalized in organizational structures and new staff positions in state and national units, in organizational initiatives such as the Teacher Union Reform Network, and in relationships at all levels with other professional educators, from principals and superintendents in local schools and districts to national partnerships, such as the Learning First Alliance.

**Importance of Teachers Unions in Telangana State**

After having lured several elected representatives of other political parties into its fold, the TRS has now focused on teachers unions. Two teachers unions — Telangana Progressive Recognised Teachers Union (TPRTU) and Telangana Rashtra Teachers Union (TRTU) had already been merged and a new union will soon be formed with the support of the state government. Sources said the TRS leaders are in consultation with the leaders of Telangana United Teachers Federation (TUTF), Telangana Physical Education Teachers Association (TPETA) and Progressive Recognised Teachers Union of Telangana State (PRTUTS) and that pressure is being exerted to bring all the teachers under an umbrella organisation Telangana Teachers Union (TTU), which will be affiliated to the TRS.

TRTU district president Darshanala Devender said the state government was planning to conduct elections to the teachers unions for electing the recognised teachers union. The elected teachers union will represent teachers during discussions with the state government. There are nearly 47 teachers unions in Telangana state and the government feels it would be hard to call each of the unions for discussions. The chief minister is reportedly planning to create a ground where there would be no opposition from the teachers unions to reforms that would be introduced soon in the education department, mainly the KG to PG free education scheme and English medium in government schools.

The Akhila Bharatiya Vidyarthi Parishad (ABVP), the student wing of the BJP, has launched an agitation against the TRS government against the delay in implementation of fee reimbursement scheme and regularisation of contract employees. The TRS already has control on Singareni workers and RTC employees as Telangana Boggugani Karmika Sangham (TBGKS) and Telangana Mazdoor Union (TMU) respectively, which are both recognised unions are affiliated to the party. The TRS wants to repeat the same with teachers. The teachers stated that majority of teachers working in the Panchayat Raj and the government schools were denied of promotions due to non-implementation of unified service rules since 2005 onwards. They also said that the implementation of unified service rules would enable the authorities to fill up vacant MEO and Deputy DEO posts for effective supervision and functioning of schools. Telangana Rashtra Teachers' Federation district president M. Prathap Reddy said that the implementation of unified service rules would strengthen the education system with the filling of

all vacant MEO and Deputy DEOs, DIET lecturers' posts, etc. He also urged the government to pass a resolution on unified service rules to amend the Article 370 (D) for the benefit of teachers. "We had been demanding the unified service rules for over a decade. If the government fails to take a decision on unified service rules than the government schools future would be at stake", argued a government school headmaster.

Some of the teachers also complained over the conduct of counselling programme for transfers and postings of teachers during the start of the academic year and the conduct of SSC supplementary examinations from June 12 and 18 onwards respectively. They suggested that the government should conduct the transfers and postings only during the coming Dasara vacations. Telangana Pranthiya Upadyaya Sangham president N. Muralidhar Rao favoured rationalisation of teachers before taking up counselling for transfers.

### **Functions of the Teachers' Unions**

- To secure membership, individually and collectively to achieve rights to attain better socio-economic status.
- To safeguard their professional interests and to secure satisfactory conditions of work and service
- To improve the professional growth of teachers through refresher courses, seminars, publications, library service and research and achieve academic skills.
- To strive for the improvement of education in tune with the challenge of rapidly-changing socio-economic situation.
- To improve the teaching faculties of subjects through the establishment of subject-teachers' associations.
- To establish a professional code of conduct for teachers and to ensure that it is the members should abide by it.

Since recent time, the Teachers' Unions have extended their activities, like organizing periodical conferences, meetings, seminars, workshops etc. besides publishing periodicals and magazines. As a consequent result of economic stress, teachers' organizations have begun to pay greater attention to the upliftment of economic and social status of teachers. They have been organizing strikes and hunger strikes to get their demands fulfilled. To achieve enhancement of salaries and improvement in the service conditions has become the main pre-occupation of the teacher's organisations since independence. Surely they have without question, achieved considerable

success. The Teachers' Unions have also been effective to a considerable extent in working against the unsatisfactory service conditions in some of the private management schools.

### **Teachers' Unions in Nizam State**

The Nizam's reign, in the beginning appeared as an ideal rule. Later, it got degenerated into a virtual dictatorship. None could go against the Firman of the Nizam and in other words it was an unadulterated autocratic monarchy. Civil Liberties were utterly unthinkable for the people of Hyderabad. Freedom of press was totally absent. About a dozen Urdu dailies functioned under the patronage of Nizam. Cabinet's approval was necessary not only for publishing any Telugu Newspaper but also for their contents. For instance, the Nizam's government refused permission to name the Telugu News Paper as 'Andhra Patrika'. So, it was named as Golkonda Patrika. The Nizam's Government imposed many restrictions on the formation of associations. Even cultural and religious associations were needed prior permission for establishment. Even if they were permitted, the government used to look upon them with suspicion and have a constant vigil on their activities. Thus there was hardly any possibility for the civil servants to form professional associations.

The Teachers' Unions in Telangana region had their origin from a puppet teachers' association, Anjuman-e-Asathija which was without the democratic character. It functioned under dictatorial directions of the rulers and was organised exclusively under the leadership of the top officers of the Education Department. Syed Ali Akbar, an Inspector of Schools, who subsequently became the Director of Public Instructions, was the first President of the association. The teachers could neither participate in its elections nor take part in its organisation and working. It was a bureaucrat-oriented organization and the teachers had to be at the beck and call of the top officials. Teachers were asked to attend the meetings only as silent spectators and were not allowed to participate in its debates. They got vexed with this association and they understood that this not serve the purpose of solving their professional problems in any way. In one of its meetings, a courageous effort was made by "Shahariyar Kaos" a teacher, boldly proposed an amendment to an officially sponsored resolution.

Consequently he was treated as a rebel by the officials but when the issue was put to vote the amendment of Kaos was resolved. Kao's courageous revolt

saw the seeds of a new movement of teachers. Simultaneously, the Nizam's Government was determined to disrupt the solidarity and integrity of the teachers.

Meanwhile, the trials and troubles of teachers were extremely focused in an editorial of 'Payam', a famous daily from Hyderabad. The editorial greatly inspired many teachers and roused their spirit and motivated them to get mobilized themselves into a professional union. The editorial was successful in creating an intense awareness of teachers' problems among the teachers of Telangana, in the erstwhile Hyderabad State. The teachers had realized the urgent need for a voluntary professional organisation to better their conditions of work. As a result some of the teachers, inspite of the oppressive policies of the government firmly resolved to form a voluntary organization for teachers and project the teacher power towards the direction of amelioration of the teaching community. Some well known teachers like Moulvi Noor Mahammed, Moulvi Ahmadullah, Moulvi Sayyad Ibrahim, Sri Sitaram and a few others were the pioneers of teachers' movement in the erstwhile Hyderabad State.

### **Teachers Unions as Political Agents**

"The power [teachers unions] wield in politics may be even more consequential than the power they wield in collective bargaining." Moe and others have contended that teachers' unions' power stems from more than their legal role as representative in collective bargaining negotiations with school district administrators. Unions' power also results from their role as political agent, acting as an interest group advocating for policies that favor their members and the union itself. Teachers' unions have considerable resources to play in the political field, drawn for the most part from the sheer size of the teachers' union and from the dues each of these members pays. In this section we first examine the research about the three main ways that teachers' unions exhibit their political power: 1) union influence over state and national elections 2) union influence on policy and opposition to reform; and 3) union influence over local school boards. We then highlight how the extant research has shown how union power varies by district characteristics predominately by district size and urban location.

### **Influence of the Associations**

So far, I have discussed the formal role that teachers and teacher organisations play, in the education administration in the State. However, the influence of the unions can be understood from the fact that teachers form an important

part of the electorate, whose voting decision may be influenced in favour of a certain political party, by the leaders of the association, Further; teachers themselves may be able to mobilize support for the candidates, by engaging in informal campaigns. Utpal Ray, General Secretary of the ABTA, in fact, reaffirmed that this happens on the ground i.e. TSTU members campaign for election candidates from the TRS. Beteille (2009) thus argues that this hold of the unions on policy makers protects them from disciplinary action that may otherwise be taken, against ineffectual teachers.

### **Unions' influence over State and National Elections**

Unions play a major role in both national and state politics. A recent study found that informants in 15 states reported that the teachers' unions were more influential, on average, than all other entities that influence state education policy. Money provides much of the explanation. Affiliates of the National Education Association or the Indian Federation of Teachers have made enormous political expenditures on political candidates and union-friendly causes, which have been among the highest contributors to state and federal election candidates. Other evidence indicates that unions similarly influence elections to state legislatures and governorships, as well as ballot initiatives directly pertaining to reform agendas and at least one study has linked higher rates of union resources and expenditures at the state level to lower levels of student performance. Importantly, the strategic use of these resources is not uniform across the national organizations. The NEA and IFT draw on somewhat different power bases, with the NEA heavily organized in suburbs and rural areas and the IFT maintaining an urban, central city power base. At key moments of national reform, these differences have translated into separate paths of influence.

### **Recommendations**

Since the teacher associations are influential, not just in terms of representing the views of teachers, who are important stakeholders in the Act, but also as major players in the education administration in the State, it follows that their objections to the Act, be at least heard and addressed. This may be possible through greater discussions and consultations, beyond the one that was held in March 2010. This can also help to actually raise more awareness about the Act, and some of its provisions. For example, the apprehension among teachers that the no-detention-policy will lead to the lowering of academic standards may be addressed by making them acquainted with the merits of

comprehensive and continuous evaluation (as envisaged by the Act). Setting out guidelines to implement the same may also be useful. Some issues like ambiguity about school hours, and special training may be addressed through the formulation of state specific rules, which are already in place for some states. But the most crucial aspect of the associations is the numbers they command, and this should be put to good use. The associations should in fact, be encouraged to spread more awareness about the Act amongst its teacher members, who can further ensure that more parents and students are aware about their rights, and exercise the same. Greater awareness may indeed be the key to the success of the Act.

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## Women's Movements in India: A Review

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### ABSTRACT

*Women's movement is not only restricted to campaigns and agitations, the feminists are actively involved in running shelters for battered wives and women who are victims of violence and also provide counseling and legal aid. They help in forming self-help groups to make women economically self-reliant. The success of the women's movement has not been in terms of the laws passed or the number of women appointed to office but in the fact that it has brought a new consciousness on the entire question of women in the Indian society. Still a large majority of Indian women live below the poverty line leading wretched miserable lives. Despite the long history of women's struggle, Indian women are one of the most backward today in terms of literacy, maternal mortality, longevity, employment and sex ratio. The women's movement is grappling with new problems with old mindsets steeped in patriarchy still prevail.*

**Keywords:** Women, social reform movement, realities, discrimination, communalism.

### Introduction

One of the most enduring cliches about India is that is a country of contradictions. Like all cliches, this one too has a grain of truth in it. At the heart of the contradiction stand Indian women: for it is true to say that they are among the most oppressed in the world, and it is equally true to say that they are among the most liberated, the most articulate and perhaps even the most free. Despite the longstanding and vigorous women's movement, patriarchy remains deeply entrenched in India, influencing the structure of its political and social institutions and determining the opportunities open to women and men. The negotiation and conflict between patriarchy and the women's movement are central to the constitution of the nation-state. The term Indian women's movement is highly contested. The appellation of "Indian," when

used for the women's movement implies a political and cultural singularity that obscures the movement's diversity, differences, and conflicts. The problem is not simply one of disunities but rather has to do with intractable conflicts involving the word "women" that derive from the central position of gender in postcolonial Indian culture and politics. Indeed, processes of gender the construction of identities, roles, and relations based on sexual differences played a key role in the historical formation of the Indian nation state. But gender cannot be separated from other, conflicting political identities, all of which play a crucial role in the life of the nation.

The roots of the Indian women's movement go back to the early nineteenth century when social reformers, beginning with Ram Mohan Roy (1772-1833), began to focus on issues concerning women. The women's movement in India took off in the 1920s, building on the 19th century social reform movement. The women's movement progressed during the period of high nationalism and the freedom struggle, both of which shaped its contours. Among the many achievements of the movement, the most significant were the constitutional guarantees of equal rights for women and universal adult suffrage in independent India.

### **Gender Participation**

Gender has been a central 'issue' in India since the colonial encounter. An overwhelming preoccupation with the "woman's question" arose from the 19th century social reform movement, crucially informed anti-colonial nationalism, and remains a point of crisis in India's cultural, social, and political space. The recognition of gender as an issue forms the basis for India's women's movement. At the same time violence against women was on the rise and widely reported in the media. There were cases of rape in police custody, wife murder (usually called bride-burning or dowry deaths) on a large scale, and sexual harassment in the workplace and on the street. Women's issues entered the fields of culture, religion, and law; of family and community structures; of the problems of and official responses to population, poverty, illiteracy, and labor; and of the new social movements of dalits, environmentalists, tribals, anti-dam activists, peasants, and trade unions. Rajeswari Sunder Rajan, taking stock of the 50<sup>th</sup> independence celebrations, comments that in "all these discourses, disciplines and sites of action, gender began to figure as an 'issue' as well as a category of analysis".

The recognition of gender as an issue powered the post-colonial women's movement, supported by feminist critiques and women's studies in academia. Women mobilized to protest violence, legal discrimination, and rising prices and agitated for better living conditions through higher wages, the prohibition of liquor, and the provision of drinking water. These women represented a wide range of castes, classes, and communities, rural and urban. But differences among these women grew, fracturing not only the category of women but also solidarities among them. In 1986 the developing tensions were exposed and fueled by the Shah Bano case. Discrimination against women in personal law had been on the women's movement's agenda since the 1920s, but the Shah Bano case catapulted the issue into a crisis of national proportions. The case intensified a process in which nationalist ideology, religious fundamentalism, communalism, and caste tensions were pitted on the site of gender. Thus embattled, women— and their movement— lost the fragile unity and broad identity in which their differences and diversities were contained in the first phase of their active political engagement. Today the women's movement in India is deeply cleaved. There is, nevertheless, a vigorous search for a viable feminist politics. To succeed, feminists must develop transformative politics, managing and (hopefully) transcending class, caste, and community differences.

### **Women movements**

Today the women's movement in India is deeply cleaved. There is, nevertheless, a vigorous search for a viable feminist politics. To succeed, feminists must develop transformative politics, managing and (hopefully) transcending class, caste, and community differences. Moreover, the women's movement has an ambiguous relationship with the state. From its inception the movement has placed a disproportionate emphasis on seeking solutions from the state, usually in the form of progressive legislation. In the colonial period such demands were constrained by the women's movement's alliance with the nationalist movement, which challenged the colonial state's intervention in Indian social relations.

In Andhra Pradesh, an anti-arrack movement was created which grew out of the awareness brought about by the mass-literacy campaigns of the National Literacy Mission (NLC). It began as a spontaneous movement against alcoholism in a remote village in Dubaganta, supported by the NLC in Nellore and adopted by the other districts of Andhra Pradesh. It is noted that there was

no organized leadership to start with in the anti-arrack movement. Most of the groundwork was done with local initiative, with women collectively protesting against arrack in their villages. With the movement gathering momentum, political parties entered at the very last stage. Eventually, the movement resulted in the declaration of total prohibition of liquor in India. In addition, it provided a change in the party in power in the state, with the Congress losing to the Telugu Desam Party. It also showed a feminist way of looking at issues, especially politics, thus aligning women's issues to the larger issues of state and society.

Women dissatisfied with the status quo joined struggles for the rural poor and industrial working class such as the Tebhaga movement in Bengal, the Telangana movement in Andhra Pradesh or the Naxalite movement. Shahada, which acquired its name from the area in which it occurred, in Dhulia district in Maharashtra, was a tribal landless labourers' movement against landlords. Women played a prominent role and led demonstrations, invented and shouted militant slogans and mobilized the masses. As women's militancy developed, gender based issues were raised. There was an anti alcohol agitation as men used to get drunk and beat their wives. Women went round villages breaking pots in liquor dens. Moreover, the women's movement has an ambiguous relationship with the state. From its inception the movement has placed a disproportionate emphasis on seeking solutions from the state, usually in the form of progressive legislation. In the colonial period such demands were constrained by the women's movement's alliance with the nationalist movement, which challenged the colonial state's intervention in Indian social relations.

The women's movement in India today is a rich and vibrant movement, which has spread to various parts of the country. It is often said that there is no one single cohesive movement in the country, but a number of fragmented campaigns. Activists see this as one of the strengths of the movement which takes different forms in different parts. While the movement may be scattered all over India, they feel it is nonetheless a strong and plural force. It is important to recognise that for a country of India's magnitude, change in male-female relations and the kinds of issues the women's movement is focusing on will not come easy. For every step the movement takes forward, there will be a possible backlash, a possible regression. And it is this that makes for the contradictions, this that makes it possible for there to be women who can aspire to, and attain, the highest political office in the country, and for women

to continue to have to confront patriarchy within the home, in the workplace, throughout their lives. Urvashi Butalia (1998) and Ritu Menon and Kamala Bhasin (1998) have discussed the deliberate absence of a record of women's voice and contribution to political situations in pre-independent India and of the patriarchal nature of our documented history. According to Geraldine Forbes (1982: 525), the 'first wave' of feminism in India was the period between the years 1880–1940. At this time several organisations formed women's wings which not only took up the cause of women but gave women space and opportunity to secure the desired changes (Natarajan 1962; Sinha 1967). Joanna Liddle and Rama Joshi (1986) and Vina Mazumdar (1976) discussed for the class-caste bias of the early women's movement impacted the kind of issues taken up for 'change'. The issues of concern were those that largely impacted the higher castes and middle classes such as widow remarriage, dowry, polygamy and property rights. Jana Matson Everett (1981: 155-62) discusses how issues which critiqued the domestic or private lives such as marriage and inheritance faced much resistance while issues concerning political or economic life such as suffrage and employment were received with less resistance from the male population in pre-Independent India. Radha Kumar (1993: 78) says 'On that memorable day thousands of women strode down to the sea like proud warriors. But instead of weapons, they bore pitchers of clay, brass and copper; and, instead of uniforms, the simple cotton saris of village India'.

The reform and nationalist movements in India saw the growth of liberalism and in many ways marked the beginning of ideas of individual freedom and equality. Shaila Desouza (2003) has shown how colonialism is sometimes the cause for the persistence of traditions resulting from indigenous resistance and awakened consciousness of identity, due to the perception of threat from this external 'force'. This perception of 'social change' as being of western origin could have percolated down to the women's movement in particular as it demands for social transformation through its struggle for equality. According to Vina Mazumdar (1985: 4), after Indian independence, 'for all practical purposes, the women's question disappeared from the public arena for ... over twenty years'. With the Constitution guaranteeing 'equality' to all citizens irrespective of caste, creed or gender (Articles 14 and 16), the need for the same demand from the women's movement seemed redundant. Then the new government development programmes temporarily silenced the militant feelings of unrest that prevailed preindependence. Radha Kumar (1993: 100)

describes the militant role played by women in this agitation: 'They led the demonstrations, invented and shouted militant slogans, sang revolutionary songs and mobilized the masses. They went from hut to hut to agitate the men and persuade them of the necessity to join the Shramik Sangatana.' The problem of family violence, wife beating and alcoholism became issues of grave concern around this time and the strategy of retaliation was adopted. Responding to both the findings of the Towards Equality Report (GOI, 1974) and the United Nation's call for action, the Government of India drew up the Plan of Action for the country. Research was highlighted as a strategy to expose the social structures/processes in the way of gender equality. The Indian Council of Social Science Research pioneered research in this area. Following the 'Towards Equality' report, a number of micro-studies were conducted all over the country which paved the way for the emergence of the new area, 'Women's Studies', in the Indian university system beginning in 1975. The rationale behind this new area of study was to make university education more relevant to social realities prevalent in society with a clear commitment to gender equality and secular values. According to Mazumdar (2000), the women's movement's engagement with the law can be divided into two wings, namely, the 'Rights Wing' and the 'Empowerment Wing'. The former refers to those who have targeted their demands on the state and seek legislative mandates for women's advancement, while the latter refers to those who place more emphasis on empowering women from 'within' themselves.

### **Women movements: Challenges and Realities**

Women's movement saw new challenges with the socioeconomic and political realities, the free market economy and growing religious conservatism. The concept of welfare state had been eroded. Overwhelming poverty of local communities, particularly the feminization of poverty was a prime concern of the women's movement. Focus now shifted to people's livelihood rights due to the destruction of the environment, religious fundamentalism and its 'use', 'misuse' and 'abuse' of women.

The reality is somewhat different. While the participation of urban, middle class women is undeniable, it is not they who make up the backbone of the movement, or of the many, different campaigns that are generally seen as comprising the movement. The anti-alcohol agitation in Andhra Pradesh and similar campaigns in other parts of India were started and sustained by poor, low-caste, often working-class women. One of the biggest challenges women

have had to face in recent years is the growing influence of the religious right in India. Right-wing groups have built much of their support on the involvement of women: offering to help them with domestic problems, enabling them to enter the public space in a limited way, and all the while ensuring that the overall ideology within which they operate remains firmly patriarchal. For activists too, this has posed major problems. It has forced them to confront the fact that they cannot assume solidarity as women that cuts across class, religion, caste, ethnic difference. And yet, they must hold fast to such an assumption if they are to work with women: for how, as an activist, do you deal with a woman who takes part in a violent right wing demonstration one day, and comes to you for help as a victim of domestic violence the next?

Perhaps the most significant development for women in the last few decades has been the introduction of 33% reservation for women in local, village-level elections. In the early days, when this move was introduced, there was considerable scepticism. How will women cope? Are they equipped to be leaders? Will this mean any real change, or will it merely mean that the men will take a backseat and use the women as a front to implement what they want? While all these problems still remain, in a greater or lesser degree, what is also true is that more and more women have shown that once they have power, they are able to use it, to the benefit of society in general and women in particular.

More generally speaking, the women's movement in India does hold legal safeguards and rights as important ingredients for the achievement of gender equality and failure of the law to achieve its purpose has been ascribed to either lack of awareness of the provisions of the law, poor access to the law (including economic restrictions), faulty implementation mechanisms, etc. The law prohibiting Pre-Natal Diagnostic Tests and the Domestic Violence Act of 2005 are examples of laws that have come into existence due to pressure from the women's movement but which are yet to be implemented in the spirit and letter under which they were drafted. The 73rd and the 74th Amendments to the Constitution, however, are examples of legislations that have transformed the lives of women not only in this generation but have given women a reason to be optimistic for a more egalitarian society in future. With the provision of 33 per cent reservation of seats in panchayat and nagarpalika bodies, women at the so called 'grass roots' of Indian society have been given the opportunity to be in formal decision making and governance. However, the fact that, the

Women's Reservation Bill or the 81st Constitutional Amendment Bill 1996, which seeks to reserve one-third seats for women in Parliament, is yet to see enactment is indicative that we are still up against resistance.

### **Times and Tides of Change within the Women's Movement**

Today, when we discuss the women's movement or women's collective action, we should consider the contribution of feminists scholars as well as the widespread and growing involvement of women in global politics, the participation of women in popular movements together with men, the ongoing women's specific demands and the work of women in their 'autonomous' and 'not so autonomous' organisations. Women's struggles today and in the past have not only been about women-specific needs and concerns. In the same breath we can also say that none of the issues of the women's movement in the 1970s and 1980s in India have ceased to be concerns of the women's movement today. In fact, some issues have become more complex with the developments that have taken place in our society such as the growing communalism, globalization, militarism, etc. However, it does seem that the activism and the level of engagement with the struggle have under gone so much change that it does seem like a thing of the past. While saying this, on the one hand, one cannot, on the other hand, say with absolute confidence that this is not the voice of a nostalgic activist.

As we progress chronologically, we see the number of such 'exceptional' women increasing and then finally it has become next to impossible to list out those who have contributed and are contributing to the women's movement today. This implies above all else that the movement has grown in size and scope of its activities. Then the volume of literature that is available today on the women's movement can be seen as an indicator of the success of the movement in carving a niche in society and creating space for women's voice. Looking back at the last four decades we can say with a fair amount of certainty that women's position in Indian society has changed. This change has been to women's advantage. There has no doubt been a wider recognition of women's rights, several steps taken towards equality among genders, a greater sensitivity towards gender discrimination, etc. The women's movement comprising of autonomous women's organisations, other women's groups, women's studies centres, etc., has played no small role in the bringing about of this change. We can, therefore, say without hesitation that, over the last 40 years, the women's movement has affected the socio-political

environment in India. However, this change has been at a gradual pace and has even affected certain sections more than others leaving yet much to be desired. Despite the current fragmentation, women's groups have come together with one concerted voice on certain issues such as violence, health, employment conditions including wages, legal rights and law reform. The issues today are sexual harassment at the work place, the violence of development, caste and communal violence, lobbying for increased political participation of women in the highest levels of decision-making, etc. The list will go on as long as there is a women's movement.

### **Conclusions**

Women from diverse castes, classes and communities have participated in the movement along with activists drawn from a variety of political trends, parties and groups belonging to various ideologies making the movement highly heterogeneous. Looking at the women's movement in India one becomes aware of the enormous variety of positions, ideologies, strategies and mass bases. There are many debates going on around unresolved issues and questions, lending a sort of vibrancy to the women's movement. The positive achievement since independence is an important factor outweighing this debate and controversy. There is the need to celebrate diverse strengths of the Indian women's movement especially its ability to meet challenges from different quarters, that is, challenges from communalism, caste movements etc. From its present position, the Indian feminist movement has a strong enough base on which to build for the future.

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## Small Districts its impact on Local governments in Telangana state

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### ABSTRACT

*This paper argues that the creation of districts in Telangana state have created large numbers of new local administrative units. The district is the most suitable administrative unit for decentralized planning below the state level as it possesses the required heterogeneity and is small enough to undertake people in planning and implementation. Unsurprisingly, Telangana government declaration led to intense lobbying and agitations by people living in the areas that were left out of this district expansion exercise. Reacting to the pressure, the headstrong and usually unyielding Telangana government declared on October 3 that there would be not 27 but 31 districts. The responsibilities of district administration have registered unprecedented expansion, making the District Collector virtually the emperor of the district. Smaller districts are therefore essential for effective provisioning of education and health facilities for improving human infrastructure, providing Physical infrastructure, improving economic opportunities for marginalized sections of society, preparing the society at large to face the challenges of disasters, etc*

*The 73rd and the 74th constitutional amendments brought in local self-government as the third tier in the democratic structure. The representative district government can be empowered by optimal utilization of the institutional strength of district administration. The Government of Telangana has formed 21 new Districts taking the total number of districts in the state to 31. It is a step to take the administration closer to the people. But, the formation of the small district does not automatically lead to good and effective governance and quality services.*

**Keywords:** Human infrastructure, Local government. Good governance, Districts etc.

**Introduction**

The volatility of creating new district local governments in Telangana state has attracted heavy domestic and feasibly significant international criticism. The phenomenon now forms part of the political and governance discourse in the country. Despite this condemnation government insists on establishing more of increasing political participation and improving social service delivery. This paper explores this phenomenon in respect to its functional and institutional relevance to local government in terms of the acclaimed benefits. The paper examines the different modes of participation at local government to the conclusion that although more Local government aimed at enhancing political participation at lower level, it has not translated into real community involvement in policy decisions neither has it contributed to improved social service delivery. For the past two decades, there has been a resurgence or renewed interest in the role of small Districts in rural development, as well as the positive role they can play in achieving an equitable and efficient settlement pattern in many developing countries.

One of the most cogent factors that led to Telangana's creation was that a smaller state would be much easier to administer. Carrying this logic forward, about two months ago, Telangana's Chief Minister, announced his plans to break the state into 27 districts saying this would bring governance closer to the people. Not that unusual on the face of it, except that the state currently has only ten districts and creating so many more in one go would be an unprecedented move. The Districts Reorganization in Telangana may have a bigger effect on Politics of the state as it will pave way for the emergence of new political leaders and weakening of powerful district level leaders. Any Party Leadership will consult strong district-level leaders before taking any decision on local matters, and now that will change the equations. Several existing district leaders will lose their hold and be confined to the new smaller districts as new leaders emerge from other areas. This will reduce the clout of the current district leaders in the party and at the same time, the state leaders will become more influential. Smaller districts will also mean that the local leaders will be no longer that powerful. There are worries in the party if the state leaders will become autocratic ignoring the district leaders who will lose their influence going further and the emerging leaders will also be not as powerful as in the previous case. All the parties are currently busy identifying leaders and committees for all the 31 districts. In recent years decentralization has come to the fore as one of the more important topics in contemporary

policy debates across large sections of the world. In developing India in particular decentralization has been as a palliative for a large number of governance problems, and as such many countries have instituted a wide variety of reforms that have devolved various functions to lower levels of government. The Telangana state improvement in administration and local development that comes with decentralization may not be as easy. Some imbalances exist in key regions.

"Good governance" assumes a government's ability to maintain social peace, guarantee law and order, promote or create conditions necessary for economic growth, and ensure a minimum level of social security. Effective decentralization can provide exciting opportunities for democratic change at the local level and can help improve national democracy as well. Decentralization may entail only the (re) establishment of local participation or it can involve a shift to the local level of a variety of functions and new financial resources in a country that has held local elections regularly for decades. When the transfer of authority is sufficient, local governments obtain the political, financial, and administrative autonomy to better address community needs.

Local governments can more easily become inclusive and accountable to the public with increased autonomy from the center and communities can become more pluralistic absent central political control. Through local participation and practices such as public meetings, citizens can participate more effectively in local decision-making, gain experience in democratic processes, and hold local officials responsible for their decisions. In short, local development can emerge. Though the debate on the role of small Districts in regional and rural development has been going on for a long time, the emerging view is one of optimism. There are three key reasons accounting for the renewed interest in small towns relating to:

- The theoretical argument about the need for a diffuse and integrated system of settlements to promote economic growth with social equity
- The reactions against the undesirable results of 'top-down' macro-economic approaches to development that failed to consider or simply ignored the lowest levels of the spatial system
- Pragmatic policy concerns about the adverse effects of Third World countries of prevailing trends in urbanization and rural development.

Besides the above, other reasons can also be cited for the renewed interest in small towns and settlements at the lower levels of the settlement hierarchy.

### **Statement of the Problem**

Views on the role of small Districts in Telangana in rural and regional development are varied and divergent. These competing views are centered on the question of whether small towns (defined in this study to include district capitals) contribute to the economic growth of their hinterland rural regions (districts), or otherwise. This definition of small towns in this study is further elaborated. However, for clarity and simplification, and for the purpose of the study, small Districts in Telangana are defined as settlements with populations between 5000 and 50,000. This definition is exemplified with district capitals or district administrative headquarters, which are usually surrounded by predominantly rural populations. For the purpose of this study, the terms small town and district capital are therefore used interchangeably, unless otherwise stated. The dominant view among many development geographers and regional development planners is that small towns among other factors are unable to fulfill their potential role in terms of facilitating the development of their rural hinterland regions due to inadequate financial and infrastructural resources.

### **Objectives of the Study**

With the specific objectives are as follows:

1. To identify the major factors accounting for the growth of small Districts in Telangana.
2. To examine the extent to which decentralization has promoted the socio-economic activities of district capitals.
3. To identify a development model which can enhance or facilitate spatial and sectoral interactions between district capitals and their rural districts.

### **Location of Headquarters in Telangana**

Telangana is situated on the Deccan Plateau, in the central stretch of the eastern seaboard of the Indian Peninsula. It covers 114,840 square kilometers (44,340 sq mi). The region is drained by two major rivers, with about 79% of the Godavari River catchment area and about 69% of the Krishna River catchment area, but most of the land is arid. Telangana is also drained by several minor rivers such as the Bhima, the Maner, the Manjira and the Musi. The annual rainfall is between 900 and 1500 mm in northern Telangana and 700 to 900 mm in southern Telangana, from the southwest monsoons. Various soil types abound, including chalk, red sandy soils, dubbed, deep red loamy

soils, and very deep black cotton soils that facilitate planting mangoes, oranges, and flowers. The geographical area of the state is 1, 12,077 sq km. On an average the size of each of the 31 districts is 3,615 km; with average dimensions of 60 sq km. This implies that a person has to travel a maximum of about 60 km to reach the district headquarters or the district administration. As all the proposed districts are neither in a compact shape nor equal in size the actual distance to the district headquarters may be more in some districts. Given large variations in the population density across the state, which varies from 170 in Adilabad district to 18,172 in Hyderabad district, equal-sized districts are not feasible. Naturally, the low population density areas in the interior parts of the state have large-sized districts. These interior areas have the relatively poorer infrastructure and connectivity. Hence, the accessibility would remain a challenge, albeit to a lesser extent, in some of the new interior districts. The location of the district headquarters can have a significant effect on the people's access to district administrative machinery. Further, the headquarters may become growth centers and catalysts for unleashing the development potential of the area and may benefit people in the vicinity. Amid speculation over new districts, people from several parts of the state are holding demonstrations demanding that their localities be made the headquarters of the new district.

People from Ibrahimpatnam have started a mass movement demanding their locality be made the headquarters for the proposed Hyderabad East district. The government, it is said, would announce Bhuvanagiri as the headquarters for a proposed district, but, the local of Bhuvanagiri are opposing the inclusion of their locality in Hyderabad and is demanding a Yadadri district. Leaders from other parts of RR district are demanding that the government announce Vikarabad as district headquarters while there is another demand from the same district for making Rajendranagar as headquarters. Leaders from Kamareddy are demanding district headquarters status for the proposed Medak district.

Meanwhile, people from Jukkal and Bhansuwada do not want to join Medak district. Former minister DK Aruna has called on CCLA Raymond Peter and requested him to announce Gadwal as a district against the government's proposal for Vanaparathi. People from Kodangal are opposing the move of the government to include their locality in Vanaparathi district. They said that the distance between Kodangal and Vanaparathi is 120 km and they need to cross two districts to reach it. An online movement is active in Bhadrachalam

demanding a district and headquarters. Similarly, there is demand for headquarters status for Mancherial and Kagaznagar for the proposed Mancherial district. People from Warangal district are demanding Manukota and Mahabubabad districts. Protest programmes are being held by locals in Siricilla and Jagtial demanding new districts as also headquarter status. People from Siricilla are opposing the government's proposal to include them in the proposed Siddipet district.

### **Balanced Regional and District Development within the Context of Structural Adjustment and Decentralization**

Since independence in 1947, central government has played, and continues to play an important role in the social and economic development of India. National policies have been formulated or geared towards spatial deconcentration. The declared aims of these policies are to address regional inequalities and promote rapid national growth. Telangana government is in the process of building new administrative complexes in all the new districts better administration is possible with smaller area of administration. As such, the need or demand for creation of new and small states has been sounding which now speared over to deem the necessity of creating new districts. Telangana government has created 21 new districts to make it an overall count of 31 with a motto of improved governance.

#### **Advantages**

- Finer division of administrative area leads to better governance.
- Creation of new districts will lead to improved facilities for public good concentrated in that area.
- Growth among the people of districts with resource distribution could be equitable and evenly monitored.
- More inclusion of local stakeholders in decision making corresponds to bottom-up strategy in development

#### **Disadvantages**

- More personnel are needed to carry on with effective governance.
- Infrastructure build-up and provision of capital with immediate effect may not be possible. The ten lack rupees sanctioned to the newly formed districts is hardly sufficient.
- Increased bureaucratic involvement in the early stages may forbid the local people involvement in taking decisions which may not lead to proper good governance and development.

Though there are equal merits and demerits, the government need to take it as a proactive move in achieving upliftment in the lives of under developed and downtrodden people of some former underdeveloped and undivided districts of Telangana, which was the base on which the Telangana movement was started and Telangana was formed.

The district headquarter is developed at the center of the district, the cascading benefits would get evenly distributed across the district. The majority of the district headquarters are not centrally located in the reorganized districts. The district headquarters are in one corner of the districts of Warangal Urban, Warangal Rural, Mancherla, Jaya Shankar, Khammam, Vicarabad, Jogulamba, Kamareddy, Sangareddy, etc. The district headquarters are far away from the middle (or central points) of many other districts. From an accessibility point of view, there would be absolutely no difference in having rural Warangal and urban Warangal districts separate or in merging them.

As the existing big towns in each of the proposed districts were chosen as the district headquarters, the glaring regional inequality in the state and districts may widen further. In a recent study on "Mandal Development Index in Telangana," it was found that urban mandals, especially the mandals in and around district headquarters and the state capital have got top 50–60 ranks, and the interior mandals are packed at the bottom. In the interest of balanced regional development, to unleash the development potential of large numbers of people and large tracts of areas and make the access to the administration easy and uniform, the government should consider developing the district headquarters, at least, the new headquarters at the center of the districts. This would compel the government and the district administration to develop quality infrastructure in new and interior areas. Developing new "Greenfield" townships and infrastructure would involve lower social costs and high social benefits.

### **Local Governance**

Local government institutions ensure vibrancy in democracy through wider political participation. True democracy required division of authority as per the subsidiary principle, that is, the central/higher level authority should have a subsidiary function, performing only those tasks which cannot be performed effectively at the more immediate or local level. Our Prime Minister's recent statement that "We cannot march through the twenty-first century with the

administrative systems of the nineteenth century" is more appropriate at the district and lower levels of governance.

The pre-1950 governance/administrative structure became operational, by default, in the Republic of India, even before the Constitution was adopted in 1950. More than the distance, the attitude and the mindset of those in charge of the official machinery have been the major impediment to ensuring good governance and inclusive development. When the mandal system was introduced in united Andhra Pradesh during the mid-1980s, people welcomed the move, not just because of the shifting of administration closer to the people, but for the abolition of the traditional village officers system, which was infamous for its manipulations and arbitrary style of functioning, especially in Telangana.

Effective involvement of the local governing institutions could significantly enhance the government's outreach. Hundreds of case studies of good practices, collected and published by the Ministry of Panchayati Raj, Government of India (2013), suggest that local governing institutions provided wonderful opportunities for women and other weaker sections to participate in governance and development processes to realize their potential. Local governing institutions are able to fulfill the diverse needs and aspirations of their citizens and also are successful in addressing gender and other social equity issues, by mobilizing resources and unleashing volunteerism in people, innovating, taking quick action in times of emergencies, restoring common resources, ensuring transparency and proper ownership of common assets, etc.

### **Effective Administration in Telangana**

Local governance entails deep institutional reforms and the development of pluralistic societies. It requires a sound political party system; effective public interest groups; a vibrant civil society and a vigilant media at the local level. Therefore, I wish to argue that the case for decentralization has often been made in a very general and uncritical way with little systematic empirical support. As the government is not going to increase personnel strength in the proportion of the increase in the number of districts, the district administration in the reorganized districts would be lean compared to the past. This may hamper the functioning of the district administration unless dramatic reforms are made in the scope and functions of the district administration. Three possible reform measures are: (i) delegation of decision-making powers to

lower-level officials; (ii) merger of different departments, which are involved in similar and integrated functions; and (iii) transfer of certain functions to the Panchayati raj institutions and urban local bodies

### **Conclusion**

I have argued above that, of all the possible explanations for the creation of new districts in Telangana state, since the formation of Telangana on 2 June 2014, the Government of Telangana has initiated a few path-breaking programmes and projects.

The reorganization of the districts is one such step to stimulate participatory governance and inclusive development. For the quick realization of the benefits of this historic step and equal distribution of the gains across the state and all sections of the people, district headquarters may be developed at the center of the new districts. To make the administration in general and the district administration in particular lean and agile, the government has planned to delegate powers to lower levels. Apart from such delegation of powers, two strategies, namely, the merger of ministries which are providing similar or integrated services, and empowerment of local governing institutions can make the governance prudent and effective.

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Hans India Daily paper

Hindu Daily paper

## **Drinking Water, Sanitation Facility and it's linkages with Diarrhea among Children under five years of Age: A Global Challenge**

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### **ABSTRACT**

*Safe water and sanitation are fundamental to human development. When people are deprived in these areas, they face diminished opportunities to realize their potential as human beings. Unsafe water and inadequate sanitation are two of the great drives of world poverty and inequality. They claim millions of lives, destroy livelihoods, compromise dignity and diminish prospects for economic growth. Poor people, especially poor women and children, bear the brunt of the human costs. At the start of the 21<sup>st</sup> century we live in a world of unparalleled prosperity. Yet almost 2 million children die each year for want of clean water and a toilet. More than 1 billion people do not have access to safe water and some 2.6 billion lack adequate sanitation. Meanwhile, inadequate access to water as a productive resource consigns millions to lives of poverty and vulnerability. The paper is based on secondary data. The research paper tries to focus on the problem of water and sanitation availability and how the dirty water and poor sanitation impacts on children under five years of age due to diarrhea.*

**Keywords:** *Drinking Water, Sanitation, Diarrhea.*

### **Introduction**

Safe water and sanitation are fundamental to human development. When people are deprived in these areas, they face diminished opportunities to realize their potential as human beings. Unsafe water and inadequate sanitation are two of the great drives of world poverty and inequality. They claim millions of lives, destroy livelihoods, compromise dignity and diminish prospects for economic growth. Poor people, especially poor women and children, bear the brunt of the human costs.

At the start of the 21<sup>st</sup> century we live in a world of unparalleled prosperity. Yet almost 2 million children die each year for want of clean water and a toilet. More than 1 billion people do not have access to safe water and some 2.6 billion lack adequate sanitation. Meanwhile, inadequate access to water as a productive resource consigns millions to lives of poverty and vulnerability.

The Millennium Development Goals (MDGs) have set us on a common course to push back poverty, inequality, hunger and illness. The world has pledged to reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation. Entering the International Decade for Action, Water for Life, 2005-2015, this report looks at the challenge of meeting the MDG target for drinking water and sanitation. Achieving the MDG drinking water and sanitation target poses even to keep up the current coverage levels; a huge backlog of rural people unversed with basic sanitation and safe drinking water, which calls for an intensive mobilization of resources to reduce the vast coverage gap between urban and rural populations.

Sub-Saharan Africa remains the area of greatest concern. It is region of the world where, over the period 1990-2004, the number of people without access to drinking water increased by 23% and the number of people without sanitation increased by over 30%. More intensive, effective and concerted action by all stakeholders is needed if the MDG drinking water and sanitation target is to be met in this region.

### **Objectives**

The Research paper has the following objectives;

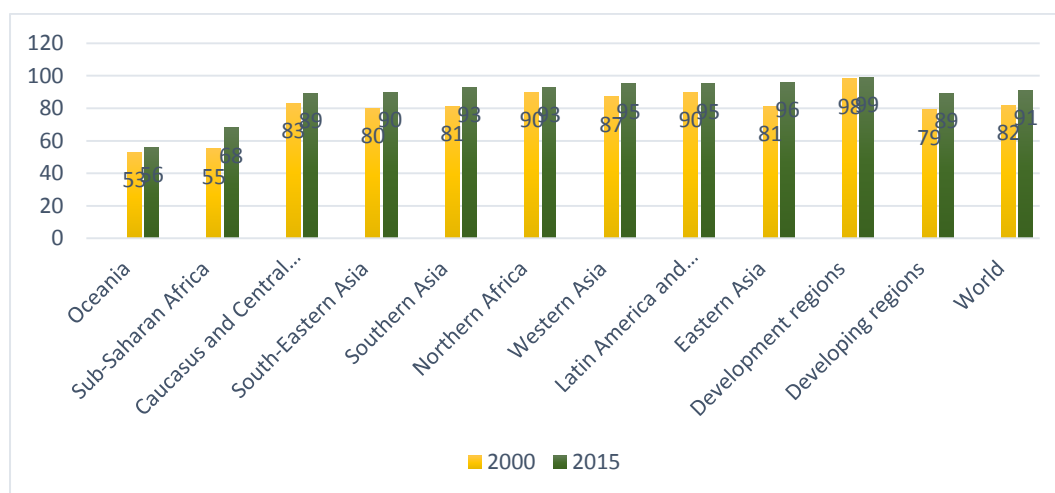
1. To study the availability of drinking water at global level.
2. To study the availability of sanitation at global level.
3. To find out the concentration of deaths due to Diarrhea in children under five years of age in the developed, developing and least developed regions.

### **Methodology**

The Research paper is based on secondary data. The main sources of data are Human Development Report 2016, World Health Organization Report.

### **Drinking Water Challenges**

**Figuer-1** Proportion of population using improved drinking water sources 2000& 2015 (%)

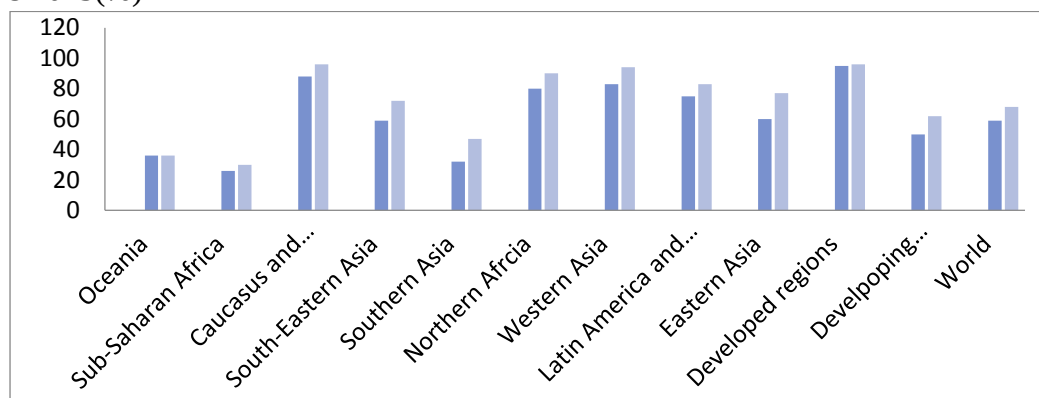


**Source:** United Nation Report 2016

The figure-1 shows that in 2015, 6.6 billion people, or 91 per cent of the global population, used an improved drinking water source compared with 82 per cent in 2000. An estimated 663 million people in 2015 were still using unimproved sources or surface water. While coverage was around 90 per cent or more in all regions except sub-Saharan Africa and Oceania, widespread inequalities persist within and among countries. Moreover, not all improved water sources are safely managed. In 2012, for example, it was estimated that at least 1.8 billion people were exposed to drinking water contaminated with faecal matter.

### Sanitation Challenges

**Figure-2** Proportion of population using improved sanitation facilities, 2000 & 2015(%)



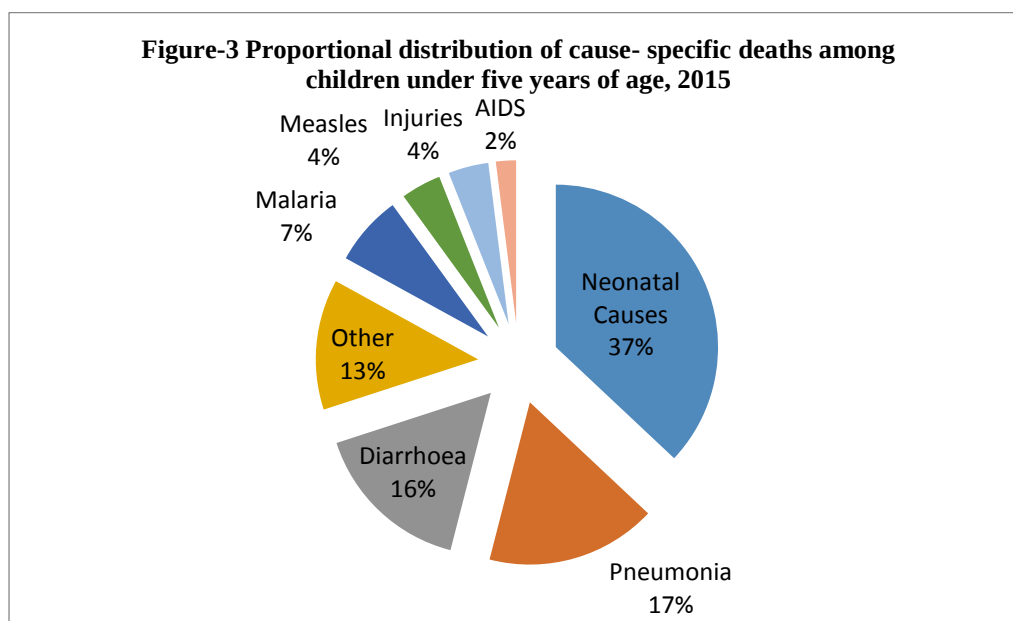
**Source:** United Nation Report 2016

The figure-2 shows that between 2000 and 2015, the proportion of the global population using improved sanitation increased from 59 per cent to 68 per cent. This means that 4.9 billion people globally were using an improved sanitation facility in 2015. However, 2.4 billion were not; among them were 946 million people without any facilities at all, who continued to practice open defecation. The unsafe management of faecal waste and wastewater continues to pose a major risk to public health and the environment.

### Diarrhoea Challenges

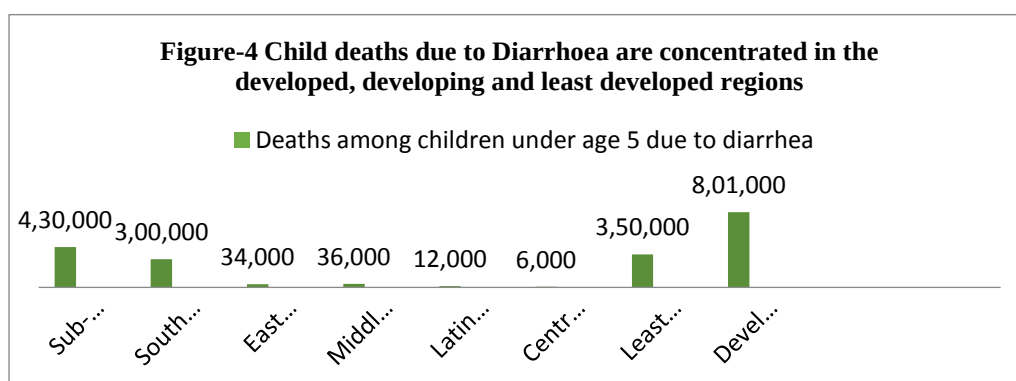
Across much of the developing world unclean water is an immeasurably greater threat to human security than violent conflict. That threat starts at birth. Unclean water and lack of sanitation are directly implicated in the huge gulf in life chances at birth that separate children born in rich countries from children born in poor countries. While life expectancy is increasing in developing countries, the rate of increase and the progress towards convergence with rich countries are being held back by the deficit in water and sanitation.

Of the 60 million deaths in the world in 2004, 10.6 million nearly 20% were children under the age of five. These fatalities accounted for a third of deaths in developing regions such as Sub-Saharan Africa and South Asia but for less than 1% in rich countries.



**Source:** World Health Organization, *Global Burden of Disease estimates, 2015 update*.

Water and Sanitation are directly implicated in a large share of deaths in children under five. These sickness episodes represent the second largest cause of childhood death after acute respiratory tract infection. In this given pie diagram (figure-3), 37% of demises are due to Neo-natal causes which is the largest portion. Remaining 63% is caused by several factors, for example pneumonia, Diarrheas, AIDS etc. Among the post Natal factors (remaining) pneumonia causes 17% of the casualties followed by diarrhea 16%, Malaria 7%, AIDS 2% etc. From the figure-3, it is clear that Diarrhea is the significant factor among all which contributes 16% of the demises.



**Source:** World Health Organization, 2015

In developing countries, deaths due to diarrhea are being occurred highest. In which Sub-Saharan Africa region contributes highest 430,000, followed by South Asia 300,000, Middle East and North Africa 36,000, East Asia and Pacific 34,000, Latin America and Caribbean 12,000 etc. Central and Eastern Europe performs better in case of Diarrhea deaths, contributes only 6,000 only.

### Findings

1. In 2015, 6.6 billion people or 91% Of the global population, used an improved drinking water source, compared with 82% in 2000.
2. In 2015 an estimated 663 million people were still using unimproved sources or surface water.
3. Between 2000 and 2015, the proportion of the global population using improved sanitation increased from 59% to 68%. However, 2.4 billion were left behind. Among them were 946 million people without any facilities at all who continue to practice open defecation.
4. Diarrhea kills 16% children more than AIDS, Malaria, Measles combined.
5. 2 million child deaths from diarrhea every year.

### Conclusion

On the basis of the analysis of data we would also try to find out whether sanitation and drinking water availability have increased during the part about 2000 to 2015. The result of this study shows that, in 2015, 91% of the global population used an improved drinking water source compared with 82% in 2000. In 2015, between 2000 and 2015, the proportion of the global population using improved sanitation increased from 59% to 68%. On the other hand 663 million people in 2015 were still using on unimproved water. 946million people practiced open defecation in 2015.

On the other hand Dirty water and poor sanitation account for the vast majority of the 2 million child deaths each year from diarrhea almost 5,000 every day. Diarrhea is the second largest cause of child mortality. Proper access to clean water and sanitation has attracted more attention because it has become a major threat to the lives of many children globally. So we call on all countries to set realistic targets, develop achievable action plans and allocate the financial and human resources needed to bring safe drinking water and basic sanitation to their populations, in a sustainable manner, while protecting the basic needs of poor and vulnerable people. This effort must be made, not only for humanitarian reasons, but also because it is highly cost-effective, reduces health costs enormously and is directly related to health, equity and economic growth, which are prerequisites for poverty alleviation.

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## **Environmental Legislations on Water Bodies: A Case study of Chilika Lake, Odisha**

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### **ABSTRACT**

*Water is considered as a vital resource for the existence of human beings on earth. Keeping in view of its invaluable use by the living organism on earth, water resource is rightly considered as the natural capital. However, with the advent of the human civilization in line with the development of science and technology along with the process of industrialization, this vital natural resource i.e. water has been severely affected in the form of pollution, scarcity and stress. As a result, it needs immediate attention for its restoration. We have been witnessing several initiatives from multiple angles at various levels to restore or conserve this vital natural resource through different policies and legislative frameworks; the water resource is not an exception. The conservation of water has become a central concern for various disciplines of natural sciences, social sciences and humanities because of its productive value that performs for human societies in particular, and the survival of entire earth in general. In this context, the present study attempts to critically review the various initiatives towards the conservation of Chilika Lake, one of the mega water lagoon located in the state of Odisha, India. The study also attempts to highlight the role of Chilika Development Authority (CDA), an autonomous state level institution towards the conservation of Chilika Lake. The community participation or village level involvements in the conservation of the Chilika ecosystem have also been discussed.*

**Keywords:** Environmental legislation, Water resources, Flora, Fauna, Chilka lagoon

### **Introduction**

The natural environment, for all its potential, significance to human societies as the territory in which human action occurs and itself modified by human agencies, is rarely construed in social terms. However, to quote Mishra and

Mishra (2008, forthcoming) “the contemporary development projects – that reached its apogee in the cutting-edge techno-economic breakthrough during 20<sup>th</sup> century – have jeopardized this vital resource with its celebration of LPG (Liberalization-Privatization-Globalization) as the engine of development”. As a result, from policies at the national level to rhetorical pledges at the international level (like World Bank, UNDP etc.), we have been witnessing several initiatives from multiple angles at various levels to restore or conserve this vital natural resource through different policies and legislative frameworks; the water resource is not an exception. The conservation of water has become a central concern for various disciplines of natural sciences, social sciences and humanities because of its productive value that performs for human societies in particular, and the survival of entire earth in general. In this context, the present study attempts to critically review the various initiatives towards the conservation of Chilika Lake, one of the mega water lagoon located in the state of Odisha, India. The study also attempts to highlight the role of Chilika Development Authority (CDA), an autonomous state level institution towards the conservation of Chilika Lake. The community participation or village level involvements in the conservation of the Chilika ecosystem have also been discussed.

### **The Chilika Lake: a natural resource base for human settlement**

As a matter of fact, the rich biodiversity of the Chilika Lake has gradually encouraged several pockets of human settlements at the fringe of the Lake. The major villages and towns or cities developed around the Lake are Balugaon, Sorana, Nairi, Kalupada, Khalikote, Satapada that currently come under the districts of Khurda, Puri and Ganjam. On the banks of Chilika there are about 8 towns and 141 villages with an estimated population of over 2, 00,000. The major point of pull factor for these Lake-dwellers is the rich resource base of the Chilika Lake. Currently, the populations of these villages and towns are preoccupied with two major occupations: fishing and agriculture where ‘Chilika’ is considered as the ultimate natural resource base for both the occupations. Now, Chilika has become a planned tourist centre, developed by the Government of Odisha because of its small island that attracts varieties of migratory birds from different corners of world, temples in and around Chilika namely Kalijai and Narayani and, the very natural scene of the lake. The major tourist centres are Balugaon, Barakul, Nalabana, Satapada, Kalijai etc. In course of time, different segments of the society have claimed their independent stake or interest over this natural resource base i.e. Chilika

Lake for their daily survival. The major stakeholders are the village communities, middlemen (the mafias) and the government. Fishing is a common occupation among the inhabitants who reside in the periphery of the Chilika Lake. About 70 percent of the population depends upon fishing as the only means of livelihood. Fisheries directly support a population of 127,000 people. In addition, apart from the export of prawns and other fish varieties like Hilsa bring good amount of foreign exchange for the State as well as National revenues. Apart from fishing, agriculture is also being practiced extensively around Chilika catchment area. More than 2000 sq. km. in the Chilika drainage basin area is used for cultivation of paddy, which is the main crop, together with maize and lentils. Table 1 presents the annual production of fish, prawn and crab as produced from the Chilika Lake.

**Table 1**  
**Annual production of fish, prawn and crab from the Chilika Lake**  
**(In tonnes)**

| Year      | Fish    | Prawn   | Crab   | Total    |
|-----------|---------|---------|--------|----------|
| 1985-86   | 7446.00 | 1144.00 | 79.00  | 8669.00  |
| 1986-87   | 7283.00 | 1589.00 | 54.00  | 8926.00  |
| 1987-88   | 6863.00 | 1241.00 | 39.00  | 8143.00  |
| 1988-89   | 5211.00 | 917.00  | 44.00  | 6172.00  |
| 1989-90   | 5493.00 | 1177.00 | 36.00  | 6706.00  |
| 1990-91   | 3792.00 | 481.00  | 24.00  | 4297.00  |
| 1991-92   | 3680.00 | 876.00  | 30.00  | 4586.00  |
| 1992-93   | 3207.00 | 951.00  | 15.00  | 4173.00  |
| 1993-94   | 2799.00 | 686.00  | 11.00  | 3496.00  |
| 1994-95   | 1239.00 | 176.00  | 3.00   | 1418.00  |
| 1995-96   | 1056.00 | 213.00  | 5.00   | 1274.00  |
| 1996-97   | 1352.00 | 281.00  | 12.00  | 1645.00  |
| 1997-98   | 1491.00 | 149.51  | 10.40  | 1651.00  |
| 1998-99   | 1555.75 | 136.93  | 9.68   | 1702.36  |
| 1999-2000 | 1556.32 | 180.40  | 9.03   | 1745.75  |
| 2000-2001 | 3817.81 | 1071.38 | 93.60  | 4982.79  |
| 2001-2002 | 9530.03 | 2347.78 | 111.07 | 11988.88 |
| 2002-2003 | 8265.16 | 2478.82 | 149.81 | 10893.79 |

-----Source:  
Government of Odisha, Directorate of Fisheries. *Handbook on Fisheries Statistics, Odisha 2000-2001*, Cuttack (Undated)

The fishing community belongs to different sub-castes: Khatia (who are engaged in fish trade), Keuta (who mostly use nets and boats for fishing), Kandara (who capture prawns by traps), Tiara (who use traps to capture small

fishes), Nolia (who are telugu-speaking and do fishing in both sea and Lake) and Bengalee refugees (as a migratory category who fish in the Lake without any customary or legal rights). But, Keuta is considered as the dominant fishing caste among fishing community (Samal, 2007).

### **Major problems and issues confronting Chilika Lake**

During the 1990s the Chilika Lake has experienced a phenomenal transformation. Now, the Lake faces a myriad of problems. The study has observed that there are mainly two broad causes that cause several problems in the Chilika Lake: natural and anthropogenic. The major natural causes are increasing siltation, weed infestation, the shifting of lagoon mouth from the original place, the decreasing level of salinity etc. According to the Range Officer of Chilika Range, the anthropogenic causes include the processes of industrialization and urbanization that have been adopted by the Notified Area Councils (NACs). As a result, the Lake confronted with several issues that include deforestation from the lagoon catchment area, overexploitation of fishing, changes in traditional fishing pattern and extensive net enclosures. For the commercial purpose, the introduction of eco-tourism also creates another problem. In addition, the use of excess mechanized boating causing oil spillage into the water also brings hazardous impact to the Lake. Thus, it is claimed that in comparison to natural occurrences, the anthropogenic activities plays a crucial role in the deterioration of the Chilika Lake, which have brought several changes in the Lake. Following are some of the major problems that have been visualized in existing Chilika ecosystem.

### **Increasing Siltation**

According to the estimation of the Department of Water Resource, approximately 1.5 million tones of sediment per year enters into the lagoon in the north from the distributaries of the Mahanadi river and 0.3 million tones per year enter the lagoon from the western catchment. The water-spread area of the lake is gradually shrinking due to this process of sedimentation. During 1973 to 1986, the shrinkage of water was from 824 sq. km. to 790 sq. km. As a result, this shrinkage has directly influenced the depth of the Lake bed as well as the choking of its mouth.

### **Salinity**

Salinity is the most dominant factor affecting the Lake's ecology. The mean surface salinity is affected by an influx of freshwater from the western catchment (approximately 536 cubic meter) and the distributaries of the

Mahanadi River (mainly the Daya, Nuna, Bhargavi Rivers; approximately 850 cubic meter) (Ghosh and Pattnaik, 1995). The reduced salinity has caused significant change in the fish catch composition and quantity. Such changes can be attributed to the gradual decline in the marine resources in the Lake.

### **Shifting of the Mouth**

The ingress of sediments from the rivers and rivulets coupled with the long shore drift prevailing in the east coast has led to shifting of the mouth of the lake. From 1914, it has been observed that the mouth has shifted 10 km. from its original position. Choking of the mouth is affecting the exchange of water and decrease in the salinity. This also affects the flushing action.

### **Weed Infestation**

Analysis of satellite data reveals that during the years 1973, 1977, 1985, 1993 and 2000, the weed covered area in the lagoon were 20, 34, 200, 398 and 514.28 sq. km. respectively (Karamkar, 2002). The weeds are emergent, floating and submerged type. The large-scale spread of the weed is restricting the feeding as well as the breeding ground of the many species of the fishes. It is also creating navigational problems and restricting the free flow of the sediments.

### **Net enclosures**

During 1990s there has been a phenomenal increase in the cultivation of different varieties of prawns by the local mafias for their commercial interest in prawn business. Here the local mafias are the individuals who are having strong economic base as well as political power. It is seen that 22 acres of area in Chilika were leased by these mafias for prawn cultivation. As a consequence, there is a reduction in the stock of fish, prawns and crabs in the Lake. Furthermore, this net enclosure for prawn cultivation also causes: problems for traditional method of fishing; hindrance to free migration of prawn and fish juveniles; and loss of grazing ground for the younger fish and prawns.

### **Depletion of fishery resources**

Intensive fish trapping by the use of mechanized boats, blockage of creeks, siltation, weed- infection, over-fishing, beyond carrying capacity is leading to the depletion of fishery resources. Other causes include mass scale trawling near the shore, fishing in the outer channel during breeding season, thus obstructing the migratory route. The impact of opening of the mouth and increase in the salinity is likely to cause some changes in the aquatic vegetation of the lake.

**Legislative measures towards Chilika Lake management**

These above mentioned varied problems that disturb the smooth functioning of the Chilika ecosystem have brought about serious concern among the policymakers. Several legislative frameworks through wide ranging policies, strategies, projects, bills and action plans have been formulated in order to address the complex issues. The present study attempts to interrogate these legislative frameworks under three sections: national legislations (policies or Acts); policies and acts of the Government of Odisha; and the role of Chilika Development Authority.

**Influence of National Legislations**

Several legislations have been enacted at the national level for the protection and conservation of natural resources, which have a larger influence directly and indirectly on the conservation of the Chilika ecosystem. The legislations include Indian Wildlife Protection Act, 1972; Water (Prevention and Control of Pollution) Act, 1974; Water (Prevention and Control of Pollution) Cess Act, 1977; Forest (Conservation) Act, 1980; Environmental Protection Act, 1986; Coastal Regulation Zone Notification, 1991; National Conservation Strategy and Policy Statements on Environment and Development, 1992; National Water Policy, 2002 and Biological Diversity Act, 2003. The details about the Acts have been discussed in the last chapter. According to the Divisional Forest Officer, Chilika Wildlife, the Environment Protection Act, 1986 and the Coastal Regulation Zone Notification, 1991 were significantly important in shaping legislative framework for preserving Chilika ecosystem. In addition, the Indian Wildlife Protection Act, 1972 is also very crucial. Under the purview of this Act, the Nalaban Island has been declared as a Bird Sanctuary in 1987. Similarly, the Water Act, 1974 and the recently implemented National Water Policy, 2002 provide a baseline for the sustainable and democratic use of the water resource of the Chilika lagoon.

**Influence of Government of Odisha Legislations**

In light of these Acts/Policies/Notifications, the Government of Odisha has passed numerous legislations for the conservation of the water resources, which have a greater bearing on the Chilika ecosystem. The details about the Odisha State legislations on water resources have been analyzed in chapter 3. However, according to the Chairman, State Pollution Control Board, ‘any sort of legislations towards the protection or the conservation of the Chilika Lake should be developed in line with the physical structure of the Lake as well as

the socioeconomic condition of the Lake-dwellers'. There is hardly any independent Act on Chilika prior to 2003. The initial management of the Lake was undertaken through the establishment of fishermen cooperative society and through three major Lease Policies.

### **Establishment of Fishermen Co-operative Society**

In the year 1923, Fishermen Co-operative Society was initially established at Balugaon by the Governments of Odisha and Bihar. Gradually its number increased to 25 in 1959, which were under the purview of the Department of Fishery, Government of Odisha. The major objectives of the societies were: to market Chilika fish and regulate its supply to the consuming centres; to eliminate the exploitation of the poor fishermen by the middlemen; and to ameliorate and rehabilitate economically poor fishermen of the lake. However, the co-operative societies became weak due to the dominance of the fish merchants and the commissions who were exploiting the poor fishermen of the lake.

As a result, the Government of Odisha constituted a committee under the Chairmanship of A. F. Laidlaw, a Canadian expert on Fishery Co-operatives to examine the functioning of the societies. The major recommendations of the committee were: establishment of an apex society to be known as Central Fishermen Co-operative Marketing Society Ltd (CFCMS); constitution of Primary Fishermen Co-operative Society (PFCS) at grassroots levels; to lease the Chilika fishing ground to the CFCMS for sub-leasing to the PFCSs; and to market all the fish captured by the members of the PFCSs through the CFCMS (Das, 1977). According to the recommendations of the Laidlaw committee, the Government of Odisha introduced Chilika Reorganization Scheme in 1959 with a dual co-operative structure to improve the socioeconomic conditions of the fishermen, the CFCMS at the top and PFCS at the grassroots level.

### **Lease Policy, 1959**

Under the Chilika Reorganization scheme in 1959, the Central Fishermen Co-operative Marketing Society Ltd (CFCMS) used to obtain the lease of the various fishery sources from Revenue Department of the Government of Odisha through the Collectors of districts of the undivided districts of Puri and Ganjam, and sub-leased them to Primary Fishermen Co-operative Societies (PFCSs). The 1959 lease policy gave priority and preference to the PFCSs in the matter of leasing fishery sources through recognition of fishermen's traditional rights.

However, during, the period 1959-1988, some PFCs after obtaining lease from the CFCMS, transferred such fishery sources to the private merchants in violation of the terms and conditions of the lease. In the meantime, Conservation and Sanctuary Committee (1981-1982) on the Chilika Lake are of the view that nobody except the government has right over the fisheries in Chilika. Even though, fishing in these waters has been declared free to the public, this concession does not institute any right in favor of any individual or group. In 1988, the important change in the lease policy was a three-year period lease operation as against annual lease in like the past. Accordingly, a total of 203 fishing sources were subleased to 49 PFCs by the CFCMS. There was no demarcation of the various fishing sources of the Chilika up to 1988.

According to the survey of Chilika fishery 1988, the lease system comprised a series of problems. The major problems were: disputes between the fishermen and non-fishermen over the question of boundaries; discrepancies between the recorded areas and the actual possession of the fishermen/non-fishermen; and subletting fishing sources by the PFCs to third parties.

### **Lease Policy, 1991**

The Government of Odisha laid down some guidelines to regulate settlement of the fisheries with effect from 1<sup>st</sup> January 1992. This is popularly known as Lease Policy, 1991 over which much controversy arose, and this policy divided the whole fishery sources of the lake into 'capture' and 'culture' sources and allowed the entry of non-fishermen of the locality for prawn culture in the lake. Till the year 1991, there was no distinction between capture and culture sources, though, the culture were going on illegally in the Chilika both by the fishermen and non-fishermen since early 1980s. However, the 1991 Lease Policy was challenged by 36 PFCs in the Odisha High Court on various grounds viz; (i) arbitrary and ambiguous distinction between 'capture' and 'culture' sources, (ii) wide spread and rampant third party sub-lease of culture sources, (iii) adverse impact on prawn culture on the eco-system of the Chilika, and others.

On the basis of the petitions of 36 PFCs, the Odisha High Court appointed a Fact Finding Committee under the chairmanship of G. S. Das. It is noted that there was not a single fisherman in the five-member committee. Due to the internal contradiction among the fishermen, there was not a single nomination among the fishing community towards the membership in the committee. The

Das Committee submitted its Report to the High Court in August 1993 recognizing the traditional right of the non-fishermen to fishing in the lake and realized the entry of mafias into the lake through the system of third party sub-lease. It observed that 1991 Lease Policy is faulty and distinction between capture and culture fisheries remain arbitrary and ambiguous in the absence of a thorough survey and appropriate demarcation of fishing sources of the lake. It is likely to perpetuate and aggravate the conflict between the fishermen and non-fishermen over the fishing sources (Das, 1993 and Samal, 2007).

Based on the findings of the Das Committee, the Odisha High Court issued its direction to the state government in its judgment dated 23<sup>rd</sup> November 1993. The court direction maintained that fishermen living on and around the Chilika do enjoy a traditional right to fishing sources of the lake, but it is not fully correct to say that the non-fishermen also enjoy a traditional right to fishing in the lake. The High Court was also of the opinion that the 1991 Lease Policy has not sacrificed the traditional rights of the fishermen in favor of the non-fishermen (Samal, 2002a).

#### **Lease Policy, 1994**

With regard to the direction of the Odisha High Court, the Government of Odisha issued some revised guidelines, which regulated the settlement of the Chilika fisheries with effect from 1<sup>st</sup> January 1994. The revised guidelines of 1994 i.e. Lease Policy, 1994 is related to (i) no-fishing zones, (ii) definition of capture and culture sources, and (iii) role of Fishery Department. The culture sources were identified in the fringe areas, that is, the area between high and low water mark of the Lake in patches. It means the controllable confined areas in the inter-tidal zone of the lake where aquatic animals can be held captive for certain period of time and from where they can be totally harvested. On the other hand, capture source in the Chilika means the traditional sources like *jana*<sup>1</sup>, *dian*<sup>2</sup>, *bahani*<sup>3</sup> and *uthapani*<sup>4</sup>. They reduced the

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<sup>1</sup> It is a fixed extensive bamboo enclosure/net enclosure by which the fish that came for shelter and food in the shallow water near the bank of the Chilika are cut off from the rest of the water and are kept confined for daily capture, until the enclosure dries up and the whole lot of the fish is caught.

<sup>2</sup> When fish remaining in the enclosure strike the border lines (which is made up of either bamboo screen or nylon net), they jump over the borderlines and fall on the nets hanged on the other sides of the enclosure. This is called *dian* (i.e., jumping). This type of *dian* fisheries extends approximately 100 to 200 yards from the shore towards the enclosure of *jana* sources.

<sup>3</sup> A type of fishing where fishing is done by large drag nets.

lease value by Rs.50, and fixed a maximum limit of area (1000 acres) to be allotted to a PFCS for culture. There is not a significant difference between the Lease policies of 1991 and 1994.

### **Fishermen's Agitation**

The fishermen have been agitating against the lease policy as well as consequent environmental degradation. There is always a conflict found between the fishermen and non-fishermen communities regarding the rights of fishing. In the early 1990's, the non-fishermen communities of Chilika filed a petition in the High Court of Odisha regarding their fishing rights. Then, in 1992, the High Court directed the State government to settle 30 percent of the fishery sources of the Lake to the non-fishermen communities and rest 70 percent for the fishermen communities. After that, the fishermen communities started agitation against the opponent communities under the banner of "Chilika Matsyajibi Mahasangh". They demanded an abolition of unauthorized prawn culture in the Lake by the non-fishermen communities, which brings huge threats to the Chilika ecosystem.

The Supreme Court of India, in the mean time, imposed a complete ban on prawn culture in the Lake and within 1,000 meters from the high water line of Chilika in 1996. As a result, the government issued an executive instruction in banning fishing culture in the Lake in 1999 (Ghosh and Pattnaik, 1995). A strong agitation was also found in early 1990s when the proposed integrated prawn farm project i.e. Chilika Aquatic Farm was closed. This project was covering around 500 hectares of land in the eastern side of the Chilika. It was feared that the effluent from the proposed projects would pollute the lake water and also posed danger to the productivity of the basin as well as adversely affecting the livelihood of the local communities. So, the fishermen organized themselves and started agitation under the banner of 'Chilika Bachao Andolan'. Some intellectuals and environmentalists extended their support to the movement. The second stage of the movement started from May 29, 1999 after a public meeting of the fishermen at Ghodadauda field at Sorana. On that day, they destroyed 11 prawn net enclosures around 1,000 acres at Baradihi, Nairi, Tarapi, Baulabandha and Balia of Khurda district.

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<sup>4</sup> It refers to fishing in shallow water (i.e., patches like small ponds) during the first rainfall in the month of June. When the rainwater from the shore areas flows into the lake, fish rush against the flow of water and goes to small ponds nearby. Sometimes, the rain water is checked with certain ridges and fishes are trapped.

There was firing by the police and some local leaders died. As a result, the lease for prawn culture in the Chilika Lake has been suspended since June 1999 by the Government of Odisha. However, the illegal and unauthorized prawn culture is going on around the Lake by the mafias. In the month of December 2001, the fishermen again started agitation against this illegal and unauthorized prawn culture in the Lake and succeeded in getting the government permission on the ban of prawn culture in the lake (Samal, 2000b).

### **The Chilika Bill, 2002 and its amendment in 2003**

As mentioned above, after the a strong agitation by the fishermen against the Chilika Lease Policies, especially the prawn net enclosures, the Government of Odisha, banned this culture and thereby introduced a bill called the Odisha Fishing in Chilika (Regulation) Bill 2002, in the State Legislative Assembly. This Bill was declared in tune with the demand of the traditional fishermen of the area. However, due to the opposition to the Bill in the Assembly, particularly by the non-fishermen legislators it was sent to a Select Committee of Odisha State Legislative Assembly, which allowed prawn culture in an indirect way and vested more power to Chilika Development Authority, a government institution on Chilika conservation, in its amendment to the Bill. The Bill (as amended by the Select Committee in September 2003) goes against the interest of traditional fishermen. The 2002 Bill (as amended by Select Committee) has, as in 1991 and 1994, allowed prawn culture in the lake. The amended Bill allows 30 percent of the sources to the non-fishermen. As a consequence, competition and conflict over the boundaries between the authorized and the unauthorized prawn culturists again gave rise to the problem of law and order in the area surrounding the Chilika.

Thus, prawn culture in and around the lake, as proposed in the amended 2002 Bill, is adversely affecting the ecosystem and reducing the quantity of fish, prawn and crab, which consequently reduce the income of the fishermen. The adoption of extensive prawn culture in the Chilka, as proposed in the amended Bill, increases siltation and thereby leads to the degradation and deterioration of the ecosystem and environment of the lake. Therefore, the amendment made by the Select Committee to the 2002 Chilika Bill, which violates 1996 Supreme Court decision.

### **State Reservoir Fishery Policy, 2003**

State Reservoir Fishery Policy, 2003 of the Government of Odisha aims at augmenting sustained fish production with advanced technology in the

reservoir, which will generate gainful rural employment to fishing communities as well as substantial revenue for the state (Government of Odisha, 2004). The fishing rights for the water bodies have to be transferred to Gram Panchayats for leasing out to co-operatives including the PFCSs for increasing the production of fish and prawn. There are also restrictions on the reservoir on operation of mechanized or motorist fishing boat, construction of permanent or temporary structure, fishing near the dam, use of explosives, poison and toxins for catching fish, discharge of industrial effluents (Samal, 2007).

Besides these major policy frameworks by the State government in case of Chilika protection, there is an important role of various institutional organizations about the conservation of the lagoon.

### **Establishment of Chilika Development Authority (CDA)**

The Government of Odisha established the Chilika Development Authority (CDA) in 1992 through Societies Registration Act of 1860. Until 1992, the management was under the control of two departments, namely, the State Fisheries Department and the State Tourism Department. In addition, the State Forest (Wildlife) Division was also responsible for the protection of Nalabana Sanctuary within the Chilika. But, it was realized that these three departments were busy in their own departmental functions; they didn't focus on the ecological degradation of the Lake. As a result, the Government of Odisha has initiated an independent autonomous institution i.e. CDA to look at the conservation of the Chilika Lake. The CDA is a registered institution under the Environment and Forest Department of the Government of Odisha. The Chief Minister acts as the Chairman of the Governing Body and its members are from the key departments, experts, eminent scientists, and representatives of fisher folk communities. The major aims of CDA include ((Ghosh and Pattnaik, 1995) :

- To protect the lagoon ecosystem and its genetic biodiversity,
  - To survey, plan and prepare a proposal for integrated resource management in and around the lagoon,
  - To understand multi-dimensional and multi-disciplinary development activities,
  - To co-operate and collaborate with other institutions for development of the lagoon, and
  - To restore the lagoon and its catchments with community participation.
- CDA received an amount of 270 million INR from a “special problem grant”

from the Ministry of Finance, Government of India under the 10<sup>th</sup> Finance Commission (1996-2000) and also further grant of 300 million INR from the 11<sup>th</sup> Finance Commission (2001-2004) for the overall improvement of the lagoon - to improve the water quality, revitalization of the lost habitat of the important species, enhancement of the productivity, integrated water resource management in the basin etc. Additionally, the World Bank supported Odisha Water Resource Consolidation Project (OWRCP) recognized Lake Chilika as a component of the OWRCP for hydro-biological monitoring of the lagoon. In addition to this, a specialist consultancy to prepare an “Integrated Management Action for Chilika Lagoon” was also supported.

### **Activities undertaken by CDA for Chilika restoration**

The major activities initiated by the CDA are:

- Address the problems faced by the CDA has taken up some ameliorating measures on the recommendations of CWPRS (Pune) with the grants from Tenth and Eleventh Finance Commission, Government of India
- Hydrological interventions in Chilika lagoon
- Excavation of a 3.2 km. long, 200 m. width and 2.5 m. depth lead channel at Magarmukh
- Excavation of 22.6 km. long lead channel between Magarmukh to Daya-Bhargavi-Nuna confluence area
- Opening of the new mouth in September 2000 in the outer channel opposite to the village Sipakuda
- Renovation of Palur canal (in progress).

The restoration strategy adopted by CDA derives its uniqueness from the strong participation by local communities; grass root-level NGOs, community based organizations, strategic partnerships with various national and international organizations and experts, government agencies and stakeholder participation. Chilika Development Authority maintains institutional linkages with 7 state government organizations, 33 NGOs (for example, Pallishree) and CBOs, 3 national government ministries, 6 other national organizations, 11 international organizations, 13 research intuitions, and 55 different categories of community groups. CDA is actively involved with other organizations to which bring successful steps for the Chilika conservation or development.

**Table 2**  
**Activities of the Chilika Development Authority and Other Organizations**

| Sl. No. | Activities                                                                                                                                                                              | Groups Engaged                                                                                         |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 1.      | Improved of water exchange and salinity by dredging, with support of mathematical model and bathymetry data                                                                             | Central Water and Power Research Station-Pune (CWPRS-Pune), Ocean Engineering Center, IIT Chennai, CDA |
| 2.      | Environmental Impact Assessment of Chilika Lagoon for dredging of outer channel by water and sediment quantity study, eco-biological quality study and circulation of siltation process | National Institute of Oceanography in Goa (NIO), CDA                                                   |
| 3.      | Weed Management and Eutrophication study                                                                                                                                                | Regional Research Laboratory (RRL), CSIR, Bhubaneswar                                                  |
| 4.      | Catchment areas afforestation and soil conservation                                                                                                                                     | State Forest Department, Soil Conservation Department, Watershed Associations                          |
| 5.      | Public Awareness, eco-development in peripheral areas                                                                                                                                   | CDA/CEE (Center for Environment Education), Community Based Organizations, NGOS                        |
| 6.      | Research and Training                                                                                                                                                                   | CDA                                                                                                    |
| 7.      | Fisheries development                                                                                                                                                                   | Fisheries Department, Stakeholders, CIFRI (Central Inland Fishery Research Institute)                  |
| 8.      | Bird sanctuary management                                                                                                                                                               | Forest Department, Bombay Natural History Society (BNHS)                                               |

Source: Ghosh, A. K. (ed.). 1995. 'Fauna of Chilika Lake' *Wetland Ecosystem Services, Zoological Survey of India 1*, 1-672.

Apart from these institutional supports, a number of international agencies from Japan, Tokyo etc. are also included in Chilika developmental activities. Japan International Cooperation Agency (JICA) has signed a three years agreement with CDA, Government of Odisha and Government of India on 11<sup>th</sup> July, 2006 for successful implementation of the project for "Conservation and Wise use of Natural Resources of Chilika Lagoon through Community Participation". The purpose is to strengthen the capacity of CDA to plan and carry out these plans for the sustainable development of rural communities

inhabiting in and around Chilika lagoon. They also conduct training programs to enhance the quality of capacity building, peoples' participation towards the conservation practice of the lagoon. A National Training Course on Integrated Water Resources Management and Wetland Conservation was conducted during 7-11 August 2006 to give training to the village people. Along with these international efforts, there are a number of NGOs (Non-Governmental Organizations) and CBOs (Community Based Organizations) individually as well as supported by CDA, which are playing vital role for Chilika protection. The networks of the NGOs and CBOs also build a very good rapport with the local communities and the help of these organizations are strongly supported for the all-round development of the lagoon ecosystem. This network played a key role in facilitating the linkages among various village-level institutions, women self-help groups and other community groups. These are helpful for the development of the capacity building, self-confidence, community participation etc. among the local people. The capacity-building programs for the women self-help groups were organized to train women on how to undertake new environmentally benign income-generating activities to supplement their family incomes.

Hence, the development of various policy frameworks as well as the institutional supports brings all-round development of Chilika lagoon. The measures taken by CDA, helps to conserve the lagoon basin as well as link the socio-economic activities in support of the local communities. Hence, Ramsar Mission visiting Chilika from 9-13 December 2001 stated, "CDA has developed an integrated approach to managing the lagoon which can be regarded as an excellent example of the whole ecosystem approach". These positive results of the short-term management interventions motivated the Ramsar Advisory Mission to recommend the removal of the Chilika lagoon from the Montreux record<sup>5</sup> and it was achieved on 11<sup>th</sup> November 2002. It is removed from this record because it can be used to promote measures to correct changes in the ecological character of a site, improve the socio-economic condition and alleviate poverty of the community who depend on it and facilitating the wise use of its resources. So, all these efforts are achieved due to the government interventions through various legislative framework partially, and the steps taken by the CDA. CDA got the most prestigious

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<sup>5</sup>The Montreux Record is a register of listed Ramsar sites where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution, or other human interference.

Ramsar Wetland Award in 2002, for its outstanding achievements in the field of restoration and wise use of the wetlands as well as for the development of the local communities has been involved in the restoration activities. Chilika Development Authority is also conferred with the prestigious Indira Gandhi Paryavaran Award - 2002 for the outstanding contribution by way of successful conservation and restoration of the eco-system of Chilika lagoon

### **Role of Non-Governmental Organizations (NGOs)**

Apart from the support from the international, national, state government initiatives and the active role of the CDA, several NGOs (Non-Governmental Organizations) and CBOs (Community Based Organizations) are playing vital role towards the restoration of the Chilika Lake. The networks of the NGOs and CBOs also build a very good rapport with the local communities and the help of these organizations are strongly supported for the all-round development of the Lake ecosystem. This network played a key role in facilitating the linkages among various village-level institutions, women self-help groups and other community groups. Here, the study attempts to highlight the role of *Pallishree*, one of the NGOs working for the restoration of Chilika Lake, which has received financial and technical assistance from UNDO, Ministry of Environment and Forest, Government of India. It is also working with support from the Japan Fund for Global Environment (JFGE) and technical assistance from Ramsar Center Japan (RCJ), established a Community Based Center for Environmental Awareness and Education (CEAE) by taking some Chilika villages. *Pallishree*, a voluntary organization situated at Bhubaneswar has inaugurated the project, “participatory eco-development of cluster villagers’ lagoon”. The project by *Pallishree* was duly sanctioned from August 2001 and meeting started on 10<sup>th</sup> August, 2001 along with the villagers of Jayamangalpur, Akashpalli and Belapada of Khurda district with a mission to environmentally educate the local residents. This is working with the objective of fostering local understanding towards the role of residents in the conservation of the lake’s unique ecosystem. Such activities include:

- Development and creation of materials and methods for environmental awareness,
- Identification of local issues through PRA (Participatory Research appraisal),
- Courses and workshops to train teachers and local leaders,

- Celebrating “World Wetland Day”,
- Establishment of a center for Environmental Awareness and Education (CEAE).

Local educated young women are assigned as moderators and educators in each CEAE. Presently only 10 of the 132 villages around Chilika have opened such education centers. Through the various stakeholders planning, training and education activities, local people around Chilika became better informed about the lagoon status, and learned how they could personally contribute to the better management of the lagoon.

### **Concluding remarks**

The study has reviewed a series of legislative actions towards the restoration of the Chilika Lake. Earlier, the key players in the process of conservation of the Lake were the State Pollution Control Board, Forest Department and Water Resource Department. The institutional innovation in the form of Chilika Development Authority has accentuated the conservation efforts initiated with the help of the international, national and state level agencies. The CDA also adopts a participatory approach that helps in closely working with several NGOs.

However, there are certain issues confined to the very activities of the CDA. Even if it adopts the participatory approach, it hardly takes the voice of the village communities who have direct regular interaction with the Lake. The officials give a rosy picture about the conservation activities. However, there are certain problems inherent in the very activities of the CDA. The work undertaken to reopen and expand mouth of the Lake is quite illustrative. The CDA officials are very optimistic about the expansion of the mouth. However, this has been contested by the village communities as well as by the other departments. According to the Block Officer, Chilika Block, there are many troubles emerging due to the opening of the new mouth of the lagoon.

The salinity of the lagoon is increased so much which affects the biophysical character of the fish community of the Lake. It also affects the groundwater or drinking water of the close by villages etc. Thus, it is necessary for the CDA to initiate activities that should not hamper the physical structure of the Lake on the one hand and the interest of the local communities on the other - in a single word, it should be vigilant to the entire Chilika ecosystem.

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## Access of Electronic Resources in Academic Libraries

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### ABSTRACT

*Recent advances in the field of Information Technology have already influenced the life in more than one direction. Its impact on the field of Library and Information Science is also quite significant, more so in advanced countries. Most obviously the situation is a resultant of the growth of electronic publishing and of networks that facilitate scholarly communication. Technological advances, especially the Information Technology are facilitating a fascinating change in libraries with a vision and are trying to accommodate all types of media for providing electronic information services to the users in a more convenient and effective way. The article describes various types of eminent Electronic resources used in libraries.*

**Keywords:** Access to Electronic Resources Types of Electronic Resources, Information Services

### Introduction

E-resources represent an increasingly important component of the collection-building activities of libraries. The guide concentrates mainly on academic and research library purposes, but nonetheless will be of high value to many types of libraries. “Electronic resources” refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally. Some of the most frequently encountered types are:

- E-journals
- E-books
- Full-text (aggregated) databases
- Indexing and abstracting databases
- Reference databases (biographies, dictionaries, directories, encyclopaedias, etc.)

- Numeric and statistical databases
- E-images
- E-audio/visual resources

This *Guide* focuses exclusively on e-resources whether acquired via purchase or license, free from the web, born digital or multiple format materials (e.g., CD-ROM combined with a book). E-resources present a number of challenges not encountered with the selection and acquisition of traditional analogue materials and it is advisable for the library to develop clear policies and processes for the selection and management of such resources. These will provide clarity to staff and ensure that e-resources within the library are developed with due consideration of cost, technical feasibility, licensing, access and preservation requirements, and constraints.

### Definitions

According to **Library of Congress** an "electronic resource" is defined as any work encoded and made available for access through the use of a computer. It includes electronic data available by remote access and direct access (fixed media). In other words: Remote access (electronic resources) refers to the use of electronic resources via computer networks. (AACR2, 2002 edition; glossary). Direct Access (electronic resources) refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment.

"**Acquire**" refers to any electronic resource, remote or direct access, which the Library provides access to through official contractual, licensed, or other agreements (any of these electronic resources may or may not be owned by or housed at the Library) or (2), the Library receives through its acquisitions processes (e.g., purchase, gift, exchange, copyright deposit, ISSN requests, and transfer).

"**Collect**" refers to electronic resources owned by the Library and selected for the permanent collections. It may also include resources stored elsewhere for which the Library has permanent ownership rights.

"**Link**" refers to pointers from the Library's web resources or bibliographic records to remote access data. "Archive" refers to that process of maintenance in a secure and permanent digital repository managed by the Library or for the benefit of the Library.

According to AACR2, update, an electronic resource is a material (data and/or program) encoded for manipulation by a computerized device (e.g. CD-ROM drive) or a connection to a computer network (e.g. the Internet).

An E-resource is an electronic information resource that can be accessed to the web, on or off the campus. Electronic information sources offer vast opportunities for readers. The information needed can be delivered from the most appropriate sources instantly and the user can satisfy his needs dynamically.

Online tools that index, abstract and provide electronic access to articles, books, e-journals, electronic database, CD-ROM, E-News, E-Images, E-Music and sound collections, etc.,

### **Types of E-resources**

#### **E-database**

An e-database is an organized collection of information, of a particular subject or multi-disciplinary subject areas. The information of an e-database can be searched and retrieved electronically. It Contents include journal articles, newspaper articles, book reviews and conference proceedings, etc. It updated on a daily, weekly, monthly or quarterly basis. An e-database is an organized collection of information. It supports flexible and in-depth searching of different fields, e.g. journal title, article title, author, abstract, year, etc.

#### **Highlighted e-databases**

##### **EBSCOhost Databases**

It offers a comprehensive set of databases, ranging from general reference collections to specially designed, subject-specific databases. Prominent e-databases available on this search platform include Academic Search Premier, ERIC, PsycInfo and SPORT Discus.

##### **ProQuest Databases**

The ProQuest Databases include citations and full text articles from a variety of databases, covering arts & humanities, business, education, health & medicine, and social sciences. Prominent databases in this search platform include ProQuest Education Journals, ProQuest Dissertations & Theses A&I, Sociological Abstracts and ABI/INFORM Complete.

##### **Scopus Database**

Scopus is an abstracting and indexing database that includes over 19,000 titles from more than 5,000 international publishers. It offers researchers a quick,

easy and comprehensive resource to support their research needs in the scientific, technical, medical, social sciences, and arts and humanities.

### **E-book**

An e-book is the electronic version of a book covering its full contents (text, tables, diagrams, illustrations, etc.) An e-book collection is usually set up in an e-database, which supports full-text searching within and across titles, advanced search and bookmark functions. Users can view full text of e-books in HTML or PDF format online.

The following are some special features of e- Books:

- a) Books never go out of print and are economically feasible to publish low demand titles.
- b) Content which includes audio and full motion video
- c) Carry several books in one small package and can save e-Books on the Internet or Computers.
- d) The visually impaired may switch to audio mode and have an e-Book read to them.
- e) Reduce environmental waste
- f) Access from anywhere.

### **Electronic Journals (E-JOURNALS)**

The advent of ICT has played a pivotal role in transforming the conventional library into a digital library. This has resulted in the proliferation of e-publishing, which provides information in a digital form. The e-journals are fast becoming the preferred format for information dissemination, especially in science and technology. The full-text e-journals can be viewed accessible via the World Wide Web (WWW) as individual.

The e-journals are made available in various modes namely:

- Free with a print subscription
- At a nominal cost with a print subscription
- As web editions only with a paid subscription

There are two types of electronic journals, the first is the offline CD-ROM version that can be distributed in a similar manner to printed journals and second one is the online or Internet-based journals.

### **Electronic newspapers**

An Electronic newspaper is a self-contained, reusable and refreshable version of a traditional newspaper that acquires and holds all information in the newspaper electronically.

**Electronic zine**

Electronic zine means Electronic magazine and it is also called web-zine. The articles that are stored on a file server may be distributed or accessed via a computer network. Some sources of electronic zine are:

[www.indiatoday.com](http://www.indiatoday.com).

[www.musicindia.com](http://www.musicindia.com).

[www.news.site.com](http://www.news.site.com).

**Electronic mail (e-mail)**

Electronic mail (e-mail) is one way of sending information from one computer to another. It works in the same way as posting a letter "snail-mail". Each network on the Internet has a unique identifier, and each person on a network also has a unique username; the combination of these two make up their e-mail address and are unique worldwide.

**Electronic theses and dissertation (ETD)**

Now days, thesis is presented in an electronic medium which is called an e-thesis. An Electronic theses and dissertation is an electronic document that explains the intellectual works or research of a researcher. [Ex.shodhganga.inflibnet.ac.in](http://Ex.shodhganga.inflibnet.ac.in)

**Usenet newsgroups**

Usenet newsgroups are another way of giving and getting information. A newsgroup is a public address, which many people can access. You may add messages to the newsgroup, and anyone else who is registered can read the message; they may then reply to you through the newsgroup or privately (i.e. to your unique address). Like mailing lists, newsgroups tend to be focused on particular topics, to limit the number of messages that will be posted to them.

**E-audio/visual resources****a) Compact Disk Read-Only Memory (CD-ROM)**

A type of storage device that looks just like an audio CD and stores as much as data of large hard disk (700-800 MB), making it a popular means of distributing fonts, photos, electronic encyclopedias, games and multimedia offerings. As the name indicates, however, one can't change files on a CD-ROM, but only read them.

In the digital age, a paperless library has already come into existence with the availability of CD-ROM databases; CD-ROM has an indispensable role to

play in the dissemination of electronic information and it has already found a special place in the rapidly growing digital libraries. In CD-ROM, text and graphics are available in digital form in the modern publishing process.

### **b) Digital Versatile Disc (DVD)**

DVD for the computer industry, is the next generation to Compact Disc in optical disc storage technology. DVD looks just like a CD, but has higher data storage capacity. The DVD's larger capacity is achieved by making the pits smaller and the spiral tighter, and by recording the data in as many as four layers, two on each side of the disc. The DVD technology provides a storage capacity that is at least 6 to 7 times greater than that of a CD, in the same aerial space.

### **c) Blu-ray Disc**

Blu-ray, also known as Blu-ray Disc (BD), is the name of the next generation optical disc format jointly developed by the Blu-ray Disc Association (BDA). The format was developed to enable recording, rewriting and playback of high definition video (HD), as well as storing large amounts of data. The format offers more than five times the storage capacity of traditional DVDs and can hold up to 25GB on a single-layer disc and 50GB on a dual-layer disc. While current optical disc technologies such as DVD, DVD-RW and DVD-ROM rely on a red laser rays to read and write data, the new format uses a blue-violet laser instead, hence the name Blu-ray Disc.

### **Institutional Repository System**

An Institutional repository is an online locus for collecting, preserving, and disseminating - in digital form - the intellectual output of an institution, particularly a research institution. For a university, this would include materials such as research journal articles, before (preprints) and after (post prints), etc...

### **Online Public Access Catalogue (Opac)**

Online Public Access Catalogue is a term used to describe any type of computerized library catalogue. Online Public Access Catalogues allows in providing the flexibility to:

1. Find out what the library has to offer
2. Check the status of an item (checked out, on shelf, on hold...)
3. Check the library record for fines, reserves, or over dues
4. Reserve an item
5. Look up community information

6. Use CD-ROM databases (such as indexes or encyclopedias)
7. Link up with library catalogues or databases in other communities

#### Keyword Searching:

In most systems the first option on the menu is a keyword search, such as a title or any word from the title. Users can search for books on a special subject by keyword.

### Uses of electronic resources in Academic Libraries

Electronic resources are very useful in changing habits of writers, readers and Undergraduate students also use information available on internet for their assignments and project works. Younger generation use more technology and can manage the information available in electronic form more easily and accurately. Almost all the academic libraries providing internet access to the readers. It is also helpful in changing the pattern of serving the library users, because now days libraries are using information and communication technologies such as bar codes, e-commerce, e-journals, CD-ROMS Due to globalization, there is entire change in the concept of library activities.

### Conclusion

In conclude we can say that the electronic resources have become the important part of today's library. It has rapidly changed the way of seeking and disseminating information. The e-information has also influenced educational world tremendously. Many of the colleges and universities are using new information technology to provide e-information as an important part of their learning and teaching strategies.

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## **An Enquiry into the Status of Information and Communication Technology Infrastructure in India in the context of Knowledge-based Economy**

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### **ABSTRACT**

*The transition from an industrial economy to a knowledge-based economy has led to a new regime. It acts as a potential for an economy's development. The significance of knowledge as a parameter of sustainable development to a great extent depends on the access to information and application of technologies across different sections of the society. The development of infrastructure related to information and larger use of technology has become instrumental in giving rise to a wide role of knowledge. India has so far failed to witness radical changes in the context of knowledge economy due to its relative backwardness. However, with the modernization and emergence of different information technology, there remains a vast possibility for India to engulf an array of challenges and opportunities of growth in the knowledge-based economy. This paper attempts to investigate the 'Information and Communication Technology Infrastructure Pillar' of World Bank's Knowledge Assessment Methodology in the Indian context and examine the relative status of ICT Infrastructure in different states of India.*

**Keywords:** Knowledge-based Economy, Knowledge Assessment Methodology Information and Communication Technology Infrastructure, Normalized score.

### **Introduction**

The operation and organization of economies has undergone substantial structural changes with the emergence of Global Production Networks. As a means of sustainable growth, several developed countries have gradually evolved from an industrial economy to a knowledge-based economy. Industrial economy is one which is driven by technology in order to facilitate mass

production to support a large population. It also provides a capacity for the division of labor and specialization that can lead to an increase in productivity. With the Industrial Revolution, industrial economies developed in the West and replaced the traditional agrarian societies. The major factor that contributed to such changes was technological change that was associated with Information and Communication Technologies (ICT). The emergence of the 'New Economy' also termed as 'post-industrial society' shows that knowledge comprises a significant proportion of a nation's GDP. The expansion of global production coupled with varying degrees of incorporation of knowledge into economic processes has led to the increased use of ICT.

The transition from an industrial economy to a knowledge-based one is often observed to happen through the information society where information is considered as an economic resource. Greater use of information is identified in organizations in an effort to increase their efficiency and stimulate innovation to retain their competitive position. Besides, information systems are being constantly improved for public access at a low cost. The function of the information sector is to satisfy the demands of the information and communication technology infrastructure, which includes telecommunication and computer networks. ICT is the main driver of the 'New Economy' and also one of the major pillars of the knowledge-based industry. Due to the ICT revolution, the real time connectivity not only widened the horizons and speed of distribution channels but also resulted in enormous cost gains because of access to and availability of information at low cost.

### **Review of Existing Literatures**

The review of literature has been carried out from the point of view of the alternative methodologies adopted to deal on issues related to Knowledge-based economy. Few literatures that adopted a different approach are mentioned below.

Lopez et.al. (2014) in their paper measures the effects of knowledge factor on the economic performance of Mexico by using partial and indirect indicators. They propose specific indicators to measure production, acquisition, diffusion and distribution of knowledge and verified their relationship with per capita GDP through a co-integration econometric model. Among these indicators, diffusion of knowledge is indicated as the most complex factor due to diffusion via invisible hand and tacit knowledge which involves difficulty in quantification.

In an essay, Ernest et.al. (2005) identifies trends in the evolution of internet and other Information and Communication Technology sector in China and its transition towards a knowledge economy. Four issues that are crucial to represent important shift in emphasis from being a technology market taker to a market maker are: the shift toward more high-level attention to software, not just hardware; the move from a discourse emphasizing domestic ICT markets to greater attention to ICT exports; a shift away from centralized structures in administration and markets toward more decentralization; and a shift in the nature and scope of technology policy from top-down state-directed programs to those more focused on creating supportive environment for innovation and entrepreneurship.

Garicano and Rossi-Hansberg (2006) presents an equilibrium theory of the organization of work in a knowledge economy where knowledge is an important input in production and agents differ in their skill. They observe two differentiated patterns of changes in the evolution of wage inequality: inequality at the top continues to grow and inequality at the bottom has stopped increasing, rather declined.

### **Objective of the Study**

The broad objective of the paper is to investigate the 'Information and Communication Technology Infrastructure Pillar' of World Bank's Knowledge Assessment Methodology in the Indian context and examine the relative status of Information and Communication Infrastructure in different states of India.

### **Data and Method**

The Knowledge Assessment Methodology framework developed by the World Bank considers a set of 76 structural and qualitative variables for 121 countries. 14 core variables are used as proxies to monitor the four pillars that are crucial for the development of a knowledge-based economy. The four pillars are Education and training; Innovation and technological advancement; Information and Communication Technology Infrastructure; and Economic and Institutional Regime. The Information and Communication Infrastructure pillar is based on three variables: Telephones per 1000 persons; computers per 1000 persons; internet users per 1000 persons. Since the broad objective of this paper is to study the ICT Infrastructure, we focus only on this particular pillar of the KAM framework and attempt to develop indicators through some modifications. This is done to accurately examine the status of infrastructure related to ICT in selected individual states. Based on conceptual understanding

and contextualization of ICT for a developing country like India, this paper suggests the following three variables for ICT Infrastructure Pillar. The variables considered for the ICT Infrastructure Pillar in this study are Internet subscribers per 1000 individual in each state, Teledensity per 1000 individuals, Mobidity per 1000 individuals and Computer/laptop per 1000 households.

The concepts of Teledensity and Mobidity claim a deeper understanding and rationalization in the present context. Teledensity is a measure of telephone availability expressed as the number of telephone connections for every 100 individuals living within an area. Earlier teledensity referred to 'fixed-line teledensity' which is defined as the number of fixed telephone lines per 100 individuals. However, with an increasing number of mobile cellular subscribers, an alternative concept was conceived which was termed as 'mobidity'. Mobidity is the number of mobile cellular subscribers per 100 individuals. The International Telecommunications Union (ITU) proposed the concept of 'effective teledensity' which means that between fixed-line connections and mobile subscribers, the one which records a higher number would be considered. Due to complexity and lack of global standards in the computation of teledensity, a better approach would be to consider both Teledensity and Mobidity in the calculation of the overall score of ICT Infrastructure

Databases used for the investigation of the ICT Infrastructure pillar are Ministry Of Statistics and Programme Implementation (MOSPI) and Indiatat. Data on Internet Subscribers is collected from Telecom Regulation Authority of India (TRAI). Data on number of Wireline (Fixed DELs) and Wireless (GSM &CDMA) are collected from Ministry of Telecommunications, Government of India.

States for which data are available on all the four variables have only been considered. This accounts for a total of 18 selected states in this study. Steps in the computation of the Normalized Score for the ICT Infrastructure pillar:

1. The actual values of each of the modified variables are determined.
2. Ranks are assigned to each state for the three variables individually.
3. A normalized score for the four variables for the selected states are computed
4. Overall normalized score for the ICT Infrastructure pillar is calculated by taking the average of the four normalized scores for each state.

The normalized score on each variable for each state is computed in the following manner.

$$\text{Normalized Score} = \frac{\text{No. of states below the particular state in rank based on the variable}}{\text{Total number of states under consideration}}$$

A state normalized score on a particular variable between 0.9 to 1.0 implies that the state is in the top 10 percentile amongst other states on the basis of its performance on that variable. Similarly a state normalized score on a particular variable between 0.1 to 0.2 implies that the state is in the bottom 20 percentile but above the bottom 10 percentile amongst other states on the basis of its performance on that variable.

### Analysis and Interpretation

Table 1 contains data on Internet subscribers per 1000 populations for selected states in 2015. In Table 2 ranks on internet subscription is assigned to each state in decreasing order, based on which normalized scores are computed. Data on internet subscribers reveals that Delhi has the best performance on this variable while Uttar Pradesh and Bihar have performed the worst. The normalized score of West Bengal is 0.22 that is between 0.2 to 0.3.

**Table 1**  
**Selected State-wise Internet Subscribers per 1000 population in 2015**

| States            | Internet Subscribers | Population (2011 Census) | Subscribers per 1000 population |
|-------------------|----------------------|--------------------------|---------------------------------|
| Andhra Pradesh    | 22120000             | 84580777                 | 261.5251454                     |
| Assam             | 5470000              | 31205576                 | 175.2891855                     |
| Bihar             | 16590000             | 104099452                | 159.3668332                     |
| Delhi             | 18500000             | 16787941                 | 1101.981476                     |
| Gujarat           | 19440000             | 60439692                 | 321.6429362                     |
| Haryana           | 7140000              | 25351462                 | 281.6405618                     |
| Himachal Pradesh  | 2590000              | 6864602                  | 377.2979118                     |
| Jammu and Kashmir | 3350000              | 12541302                 | 267.1174014                     |
| Karnataka         | 20100000             | 61095297                 | 328.9942268                     |
| Kerala            | 12960000             | 33406061                 | 387.9535513                     |
| Madhya Pradesh    | 16630000             | 72626809                 | 228.9788059                     |
| Maharashtra       | 40030000             | 112374333                | 356.2201344                     |
| Odisha            | 7300000              | 41974218                 | 173.9162836                     |
| Punjab            | 12880000             | 27743338                 | 464.2555989                     |
| Rajasthan         | 15790000             | 68548437                 | 230.3480676                     |
| Tamil Nadu        | 24140000             | 72147030                 | 334.5945079                     |
| Uttar Pradesh     | 34570000             | 199812341                | 173.0123366                     |
| West Bengal       | 19200000             | 91276115                 | 210.3507582                     |

Source: Telecom Regulation Authority of India, MOSPI

**Table 2**  
**Ranking of States Based on the Number of Internet Subscribers in 2015**

| States            | Subscribers per 1000 population | Rank | Normalized score |
|-------------------|---------------------------------|------|------------------|
| Delhi             | 1101.98                         | 1    | 0.94             |
| Punjab            | 464.26                          | 2    | 0.89             |
| Kerala            | 387.95                          | 3    | 0.83             |
| Himachal Pradesh  | 377.3                           | 4    | 0.78             |
| Maharashtra       | 356.22                          | 5    | 0.72             |
| Tamil Nadu        | 334.59                          | 6    | 0.67             |
| Karnataka         | 328.99                          | 7    | 0.61             |
| Gujarat           | 321.64                          | 8    | 0.56             |
| Haryana           | 281.64                          | 9    | 0.5              |
| Jammu and Kashmir | 267.12                          | 10   | 0.44             |
| Andhra Pradesh    | 261.53                          | 11   | 0.39             |
| Rajasthan         | 230.34                          | 12   | 0.33             |
| Madhya Pradesh    | 228.98                          | 13   | 0.28             |
| West Bengal       | 210.35                          | 14   | 0.22             |
| Assam             | 175.29                          | 15   | 0.17             |
| Odisha            | 173.92                          | 16   | 0.11             |
| Uttar Pradesh     | 173.01                          | 17   | 0.06             |
| Bihar             | 159.37                          | 18   | 0                |

In Table 3 the number of Wireline (Fixed DELs) Telephones per 1000 populations for the 18 states in 2015 is given. Table 3 ranks each state according to the Fixed Line (Wireline) Teledensity and then the normalized scores are calculated. Delhi and Bihar records the best and the worst performance respectively for Wireline Teledensity as well. However West Bengal projected a better performance in Wireline density compared to internet subscription.

**Table 3**  
**Number of Wireline (Fixed DELs) Telephones in India in 2015**

| States         | Wireline Phones (Fixed DELs) | Population (2011 Census) | Fixed Line Teledensity |
|----------------|------------------------------|--------------------------|------------------------|
| Andhra Pradesh | 1870000                      | 84580777                 | 22.10904258            |
| Assam          | 170000                       | 31205576                 | 5.447744339            |
| Bihar          | 360000                       | 104099452                | 3.458231461            |
| Delhi          | 3140000                      | 16787941                 | 187.0390181            |
| Gujarat        | 1550000                      | 60439692                 | 25.64539872            |
| Haryana        | 410000                       | 25351462                 | 16.1726373             |

|                  |         |           |             |
|------------------|---------|-----------|-------------|
| Himachal Pradesh | 210000  | 6864602   | 30.59172258 |
| Jammu & Kashmir  | 150000  | 12541302  | 11.96048066 |
| Karnataka        | 2280000 | 61095297  | 37.31874812 |
| Kerala           | 2590000 | 33406061  | 77.53084089 |
| Madhya Pradesh   | 1110000 | 72626809  | 15.28361242 |
| Maharashtra      | 5180000 | 112374333 | 46.09593545 |
| Orissa           | 320000  | 41974218  | 7.623727499 |
| Punjab           | 1120000 | 27743338  | 40.37005208 |
| Rajasthan        | 820000  | 68548437  | 11.96234423 |
| Tamil Nadu       | 2760000 | 72147030  | 38.255213   |
| Uttar Pradesh    | 990000  | 199812341 | 4.954648922 |
| West Bengal      | 1440000 | 91276115  | 15.77630687 |

**Source:** Ministry of Telecommunications, Govt. of India

**Note:** Andaman & Nicobar is included in West Bengal, Jharkhand in Bihar, Chhattisgarh in Madhya Pradesh, Uttarakhand in Uttar Pradesh, Chennai in Tamil Nadu.

**Table 4**  
**Ranking of States Based on Fixed Line Teledensity in 2015**

| States           | Fixed Line Teledensity | Rank | Normalized Score |
|------------------|------------------------|------|------------------|
| Delhi            | 187.04                 | 1    | 0.94             |
| Kerala           | 77.53                  | 2    | 0.89             |
| Maharashtra      | 46.1                   | 3    | 0.83             |
| Punjab           | 40.37                  | 4    | 0.78             |
| Tamil Nadu       | 38.26                  | 5    | 0.72             |
| Karnataka        | 37.32                  | 6    | 0.67             |
| Himachal Pradesh | 30.59                  | 7    | 0.61             |
| Gujarat          | 25.65                  | 8    | 0.56             |
| Andhra Pradesh   | 22.11                  | 9    | 0.5              |
| Haryana          | 16.17                  | 10   | 0.44             |
| West Bengal      | 15.78                  | 11   | 0.39             |
| Madhya Pradesh   | 15.28                  | 12   | 0.33             |
| Rajasthan        | 11.96                  | 13   | 0.28             |
| Jammu & Kashmir  | 11.96                  | 14   | 0.22             |
| Orissa           | 7.62                   | 15   | 0.17             |
| Assam            | 5.45                   | 16   | 0.11             |
| Uttar Pradesh    | 4.95                   | 17   | 0.06             |
| Bihar            | 3.46                   | 18   | 0                |

Table 5 gives data on Mobidensity (Wireless GSM and CDMA per 1000 populations) in 2015. States are ranked on the basis of Mobidensity and normalized scores are determined in Table 6. Delhi projects the best performance and Assamis at the bottom in the case of Wireless Teledensity. In case of Mobidensity, West Bengal although records a better performance compared to internet subscription but a slight deterioration in comparison with Wireline Teledensity.

**Table 5**  
**Number of Wireless (GSM & CDMA) Telephones in India in 2015**

| States           | Wireless<br>(GSM&CDMA) | Population<br>(2011 Census) | Mobidensity |
|------------------|------------------------|-----------------------------|-------------|
| Andhra Pradesh   | 71950000               | 84580777                    | 850.6661035 |
| Assam            | 17150000               | 31205576                    | 549.5812671 |
| Bihar            | 69310000               | 104099452                   | 665.8056183 |
| Delhi            | 46190000               | 16787941                    | 2751.379696 |
| Gujarat          | 58560000               | 60439692                    | 968.8997092 |
| Haryana          | 22010000               | 25351462                    | 868.1945049 |
| Himachal Pradesh | 7860000                | 6864602                     | 1145.004474 |
| Jammu & Kashmir  | 9310000                | 12541302                    | 742.3471662 |
| Karnataka        | 58050000               | 61095297                    | 950.1549686 |
| Kerala           | 31350000               | 33406061                    | 938.4524563 |
| Madhya Pradesh   | 60600000               | 72626809                    | 834.402624  |
| Maharashtra      | 107610000              | 112374333                   | 957.6030142 |
| Orissa           | 27870000               | 41974218                    | 663.9790168 |
| Punjab           | 30630000               | 27743338                    | 1104.048835 |
| Rajasthan        | 55210000               | 68548437                    | 805.4158842 |
| Tamil Nadu       | 80320000               | 72147030                    | 1113.282141 |
| Uttar Pradesh    | 135420000              | 199812341                   | 677.7359162 |
| West Bengal      | 69630000               | 91276115                    | 762.8501717 |

**Source:** Ministry of Telecommunications, Govt. of India

**Note:** Andaman & Nicobar is included in West Bengal, Jharkhand in Bihar, Chhattisgarh in Madhya Pradesh, Uttarakhand in Uttar Pradesh, Chennai in Tamil Nadu.

**Table 6**  
**Ranking of States Based on Mobidensity in 2015**

| States           | Mobidensity | Rank | Normalized Score |
|------------------|-------------|------|------------------|
| Delhi            | 2751.38     | 1    | 0.94             |
| Himachal Pradesh | 1145        | 2    | 0.89             |
| Tamil Nadu       | 1113.28     | 3    | 0.83             |
| Punjab           | 1104.05     | 4    | 0.78             |
| Gujarat          | 968.9       | 5    | 0.72             |
| Maharashtra      | 957.6       | 6    | 0.67             |
| Karnataka        | 950.15      | 7    | 0.61             |
| Kerala           | 938.45      | 8    | 0.56             |
| Haryana          | 868.19      | 9    | 0.5              |
| Andhra Pradesh   | 850.67      | 10   | 0.44             |
| Madhya Pradesh   | 834.4       | 11   | 0.39             |
| Rajasthan        | 805.42      | 12   | 0.33             |
| West Bengal      | 762.85      | 13   | 0.28             |
| Jammu & Kashmir  | 742.35      | 14   | 0.22             |
| Uttar Pradesh    | 677.74      | 15   | 0.17             |
| Bihar            | 665.81      | 16   | 0.11             |
| Orissa           | 663.98      | 17   | 0.06             |
| Assam            | 549.58      | 18   | 0                |

Table 7 present data on Number of Computers/Laptops per 1000 populations and normalized scores of the variable for each state are determined in Table 8. Gujarat happens to be the best performer in this variable.

**Table 7**  
**Number of Computers/Laptops in India ( Census 2001)**

| States and U/T   | Computer/Laptop<br>(without internet<br>connection) | No. of households | Computer/Laptop<br>per 1000<br>households |
|------------------|-----------------------------------------------------|-------------------|-------------------------------------------|
| Andhra Pradesh   | 1214271                                             | 20124534          | 60.33784434                               |
| Assam            | 493311                                              | 6367295           | 77.47575697                               |
| Bihar            | 1169044                                             | 18940629          | 61.72149827                               |
| Delhi            | 383997                                              | 3340538           | 114.9506457                               |
| Gujarat          | 695888                                              | 1218718           | 571.0000181                               |
| Haryana          | 374866                                              | 4717954           | 79.45520452                               |
| Himachal Pradesh | 82145                                               | 1476581           | 55.63189557                               |

|                 |         |          |             |
|-----------------|---------|----------|-------------|
| Jammu & Kashmir | 110383  | 2015088  | 54.77825286 |
| Karnataka       | 1053785 | 13179911 | 79.95387829 |
| Kerala          | 731035  | 7716370  | 94.73819944 |
| Madhya Pradesh  | 671130  | 14967597 | 44.83886091 |
| Maharashtra     | 1794680 | 23830580 | 75.30995888 |
| Odisha          | 355673  | 9661085  | 36.81501612 |
| Punjab          | 397985  | 5409699  | 73.56878821 |
| Rajasthan       | 643422  | 12581303 | 51.14112584 |
| Tamil Nadu      | 1184373 | 18493003 | 64.04438479 |
| Uttar Pradesh   | 2054674 | 32924266 | 62.40606852 |
| West Bengal     | 1225115 | 20067299 | 61.05031873 |

**Source:** Office of the Registrar General and Census Commissioner, India

**Table 8**  
**Ranking of States based on Computer/Laptop per 1000 Households**

| States and U/T   | Computer/Laptop per 1000 households | Rank | Normalized Score |
|------------------|-------------------------------------|------|------------------|
| Gujarat          | 571                                 | 1    | 0.94             |
| Delhi            | 114.95                              | 2    | 0.89             |
| Kerala           | 94.74                               | 3    | 0.83             |
| Karnataka        | 79.95                               | 4    | 0.78             |
| Haryana          | 79.46                               | 5    | 0.72             |
| Assam            | 77.48                               | 6    | 0.67             |
| Maharashtra      | 75.31                               | 7    | 0.61             |
| Punjab           | 73.57                               | 8    | 0.56             |
| Tamil Nadu       | 64.04                               | 9    | 0.5              |
| Uttar Pradesh    | 62.41                               | 10   | 0.44             |
| Bihar            | 61.72                               | 11   | 0.39             |
| West Bengal      | 61.05                               | 12   | 0.33             |
| Andhra Pradesh   | 60.34                               | 13   | 0.28             |
| Himachal Pradesh | 55.63                               | 14   | 0.22             |
| Jammu & Kashmir  | 54.78                               | 15   | 0.17             |
| Rajasthan        | 51.14                               | 16   | 0.11             |
| Madhya Pradesh   | 44.84                               | 17   | 0.06             |
| Odisha           | 36.82                               | 18   | 0                |

The overall normalized score for the ICT Infrastructure Pillar is presented in Table 9. The overall score is computed by taking the average of the

normalized scores of the four variables for each state. Due to its best performance in three out of four indicators, Delhi projects to be the best performer in the ICT Pillar. Due to poor performance in almost all the four variables, West Bengal and Bihar remain at the bottom 40 percentile in terms of ICT infrastructure with only a relative change in position after the computation of the overall normalized score.

**Table 9**  
**Overall Normalized Score for the Information Infrastructure Pillar**

| <b>States</b>     | <b>Normalized Score for Information Infrastructure Pillar</b> |
|-------------------|---------------------------------------------------------------|
| Delhi             | 0.9275                                                        |
| Kerala            | 0.7775                                                        |
| Punjab            | 0.7525                                                        |
| Maharashtra       | 0.7075                                                        |
| Gujarat           | 0.695                                                         |
| Tamil Nadu        | 0.68                                                          |
| Karnataka         | 0.6675                                                        |
| Himachal Pradesh  | 0.625                                                         |
| Haryana           | 0.54                                                          |
| Andhra Pradesh    | 0.4025                                                        |
| West Bengal       | 0.305                                                         |
| Madhya Pradesh    | 0.265                                                         |
| Rajasthan         | 0.2625                                                        |
| Jammu and Kashmir | 0.2625                                                        |
| Assam             | 0.2375                                                        |
| Uttar Pradesh     | 0.1825                                                        |
| Bihar             | 0.125                                                         |
| Odisha            | 0.085                                                         |

### **Concluding Remarks**

Advancement and wider application of ICT has played major role in the paradigmatic shift from industrial economies to knowledge-based economies. ICT is a major tool for increased productivity and efficiency. Appropriate use of ICT can make the economies transform and adapt to knowledge-based ones. For an emerging economy like India, development of ICT infrastructure alone can provide the requisite competitive edge for sustenance in the global platform.

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## Urban Regional Centers Growth in India - A Study in Telangana

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### ABSTRACT

*In the context of proposed rapid urbanization in Asia, this article attempts to analyze the pattern, issues and policy aspects of urbanization in the rapidly urbanizing state of India (Telangana) and its capital city region (Hyderabad city). Both India and Telangana have encouraged 'top heavy character', city - region disparities and associated problems of environment and development of Indian urbanization. Economically, urbanization has greater association with the tertiary sector, and higher contribution from the primary sector has led to more of 'urban' character of Telangana's urbanization. In Telangana, Southern Maidan is the highest urbanized region with highest concentration of urban population, cities and towns as well as high growth performance towns. It has been projected that 21st century will be the urban century with almost 60 per cent of the world population living in urban areas by 2030; the highest share of population ever lived in urban areas. This is mainly because unlike previous centuries, current and future centuries are likely to experience rapid shift in the nature of human activities from primary to non - primary mainly due to changing resource base and environmental conditions, and rapid progress in human endeavors in science, technology, management and development. Such a shift obviously enhances human affordability and capabilities to achieve the improved standard of living through better access to infrastructure and services.*

**Keywords:** Urban Geography, Standard Urban Area, Nagarpanchayats, Municipalities etc.

### Introduction

Urban Geography is the significant branch of Human Geography. It has become important over the years because of the spread of cities and towns. It

is said that God made the country and manmade the town. Towns and cities are supposed to be as old as civilization. Urban Geography is a science which studies various aspects of towns and cities. Cities are transformers of historical change. They have been the scene and setting throughout human history of major social, economic and political changes. Most of the studies in urban geography done in India by Indians dealt upon the origin and evolution of towns and cities. History of civilization is almost synonymous with the history of cities. The aspects which have been dear to geographers are the internal structures of the cities including form and morphology, the flow of people and goods; the land use and the functional aspects of the city. Any kind of settlement whether it is small or large form an inseparable part of the whole settlement fabric in a region. The principle functions which tie up different settlements are social, political and economical. This functional relationship may be readily perceptible between any two (rural and urban) settlements.

Notwithstanding their conspicuous differences, urban and rural areas are invariably linked. Together they constitute a functional system of settlements in a given region. India as a developing country is urbanizing at a rapid pace. The absolute size of urban population is enormous. By the turn of the millennium about 300 million Indians lived in nearly 3700 towns and cities (urban areas) spread across the length and breadth of the country. This comprised of nearly 30 per cent of its total population in sharp contrast to 60 million (15 per cent) who lived in urban areas in 1947 at the time of our independence. During the last 50 years the population has grown two and a half times more and the urban India has grown as almost second largest in the world, only next to China.

Telangana has been witnessing a rising urban population and the growth of urban areas – both in number as well as geographical area - over last more than two decades. Urban planning is a critical challenge in the face of burgeoning problems of urban growth and population concentration in cities.

Land use control, town planning and urban development legislations have a direct impact on urban growth and development. The legislations dealing with land use planning control, spatial growth management and urban development comprise of zoning, land sub-division, layout and building regulations to provide for and regulate the use of land and built space. These are of greatest concern to the urban development sector as they affect the initiatives of individuals. The implementation of plan and accompanying regulations either

makes or mars a city's development prospect Transparency in understanding and applying land use planning and development control is crucial, particularly at the implementation stage of plan. Unfortunately, the track record in most towns of TS points towards ambiguity in interpretation, application and implementation of development plan by the municipalities/ development authorities. This leads to considerable delay in clearances of land use and development plans, increase the transaction costs. In many instances, there are gross violations of zoning and building regulations, unauthorised constructions and unplanned settlements. All these place undue strain on city infrastructure systems and reduce the potential of cities to contribute as engines of economic growth. The focus of reforms, therefore, ought to be on streamlining the urban planning process, judicious and optimal land use, efficient plan implementation mechanisms, improvement of titling and registration.

**Definition**

“Urban geography is infact the intensive study of towns and theirs development in all their geographical aspects,” L.D. Stamp “Urban geography is the geographic study of urban places which evolve, grow and exist as service centers for their surrounding areas”, G.S.Gosal.“In urban geography studies are made regarding the structure, process and stages of urban settlement as the home of man which determine its physical structure, social and economic characteristics along with traditional process or urban development”.

**Urbanization and Regional Development**

Given the fact that poverty is generally less in urban areas, and the continual rural to urban drift, overall poverty in a nation will probably decline, assuming the distribution of income in urban and rural areas remains the same. It is certain that the level of urbanization (that is the proportion of people living in urban areas) is associated in some places with numerous, positive outcomes such as technological innovation, forms of creativity, economic progress, higher standards of living, enhanced democratic accountability and women's empowerment.<sup>179</sup> Besides, rapid urbanization lead by large cities is an indicator of increasing regional income inequality and economic activities which affect the growth and stagnation of the small and medium cities across world. The primacy of the economy of the regions and the country is reflected in the number of cities of different order existing at any given time. The growth of metropolitan or larger cities also affects the growth of adjoining

small and medium towns and in some cases stagnate the town's growth owing to their spatial linkages. It also affects the urban employment prospects in the poorer regions and contributes to migration from the small and medium towns to newer or emerging cities and economies. Telangana, the youngest State in the Union of India, was the result of a prolonged struggle, actively participated by the people cutting across all sections, for a new life of hopes and aspirations. The genesis of the movement can be traced to a deliberate neglect of Telangana in the combined State of Andhra Pradesh.

### **Status of Urbanization**

Out of total 13.72 million urban populations in the state of Telangana reported by the Census 2011, 12.41 million is covered by the 73 urban local bodies. These centers are designated with statutory status thus eligible for provisions of 74th CAA. About 1.3 million people are residing across 79 census towns that are morphologically and functionally of urban character but covered by policies and programmes of rural areas. The trend and nature of urbanization in the state of Telangana leads to the following conclusions;

- a) The urban growth is rapid as compared to other states and this will continue to pose a pressure on the sanitation infrastructure in the urban centers.
- b) Need for policy formulation for the rapidly urbanizing areas in the state.
- c) Urbanization has to be viewed differently in case of the state of Telangana given its diverse topography including Eastern Ghats and plateau areas that has varying environmental carrying capacity for the sanitation infrastructure and services. Based on the foregoing rationale, it is imperative that the state's urban policy be developed.

### **An Overview of Regional Urbanization Process**

Century is set to become India's urban century with more people living in cities and towns than in the country side (rural areas) (Goldman Sachs, 2007). India has 10 of the fastest growing cities in the world and is witnessing massive urbanization. The urban growth is happening not only in large cities but also in small and medium sized towns. This chapter aims at analyzing the size and growth of Urban India across the states. For the analysis purpose the data from 1901, 1991 and 2001 census is used. This part of the study covers the Pattern of growth of urban population in India, State-wise growth of urban population and drivers of urban growth in India, State level trends and disparities in urban growth. Finally, it covers the analysis of the fruitful policies and conclusions

Manufacture-led urbanization may be characterized as: a) High concentration of workforce engaged in the manufacturing sector, b) Higher share of workforce with technical specialization, c) Growth of the small-scale sector as ancillaries to feed the production requirements of large-scale manufacturing units, d) More organized labour with less disparity in income, and e) Demand for better land use planning for organized location of manufacturing activities, labour and associated economic and service activities.

### **Objectives**

- To review the urban growth in Telangana the rising needs of infrastructure development.
- To review the master plan/development plan system followed in the towns of Telangana in managing urban growth
- To describe the process, features and importance of town planning schemes in the context of urban areas.
- To document the successful practice of town planning schemes implementation in Indian states.
- To suggest a road map for the introduction of town planning schemes into master plan infrastructure development process, including its integration into current planning of Telangana.

### **Problem Statement**

Cities are responsible for most of the global final energy use and carbon emissions. Energy use and emissions are coupled to urban form (the physical configuration of a city) through land use conversion, transportation, and consumer preferences. Urban form in India is undergoing extensive transformation due to changing lifestyle preferences and decentralized expansion into arable land. Urban growth in one city affects growth of other cities on a regional scale Exchanges of labor, material, information, and energy between clustered cities results in tremendous growth in some cities and marginal growth in others.

### **Urbanization in India**

Urban area is generally referred to as a relatively large area with densely settled population engaged primarily in non-agricultural economic activities. The definition of an urban area varies from country to country. Every nation has its very own definitions of urban concepts. In India a place was defined in 1901 census as an urban area so as to include (1) a municipal corporation,

municipal area, all civil lines not included in municipal limits or cantonment board (2) every other continuous collection of houses permanently inhabited by not less than 5000 persons which the Provincial Superintendent might decide to treat as a town for census purposes. This definition of an urban area continued to be used upto 1951 census. But in 1961 census the definition was made more specific. The 1961 census defined a town so as to include the following (1) all places with a local government administration like a municipality, a municipal corporation, town committee, notified area committee or cantonment board (2) all other places which satisfied the following criteria: (a) a density of population of not less than 400 person per square km. (b) a minimum population of 5000 and at least (c) 75 percent of the male working population engaged in non agricultural pursuits. The 1981 census, definition however was made more rigid for the classification of urban area. The following is called an urban area according to 1981 census –

1. All places with a municipality, corporation or cantonment board or notified town area.
2. All other places which satisfy the following criteria-
  - i. A minimum population of 5000.
  - ii. At least 75% of the male working population engaged in non agricultural and allied activities.
  3. A population of at least 400 persons per sq. km or 1000 persons per square mile.
  - iii. Places which though not satisfying the above criteria but have pronounced urban characteristics.

This criterion was more or less the same in census 1991 and census 2001. In 1981 and 1991 censuses the male working activities such as fishing, logging etc. were treated at par with cultivation and agriculture unlike in 1961 and 1971 and this test was strictly applied and no area was included on local considerations. A new concept called ‘town group’ was introduced in 1961 census for the first time. Towns which were either contiguous or near each other having separate, legally constituted civic administration like municipality, ‘Panchayat’, cantonment or a township have been grouped together to form a town group which will serve as a unit for statistical purposes. Another concept ‘Urban Agglomeration’ (UA) was introduced in 1971 census which was followed in 1991 census also. An urban agglomeration forms a continuous urban spread constituting a town or its adjoining urban area or two or more physically contiguous towns together with continuous, well organized urban outgrowth.

One more new concept 'Standard Urban Area' (SUA) was also introduced in 1971 census. For delimiting SUA not only the town and the villages were taken into account but also the core city and the intervening areas which were potentially urban. The SUA spreads beyond the urban agglomeration. The boundary of the Standard Urban Area marks the limit up to which continuous urban growth is seasonally expected to take place in the next few decades. While constituting the SUA, the town and the villages, which were likely to get merged with the core city besides the intervening areas, are potentially urban. All the urban agglomerations of 1971 census have also been constituted as Standard Urban Areas. The formation of SUA's will help urban planning and regulation of urban growth. In Census of India, 2001 two types of town were identified.

### **Urban Development in Telangana**

The most urbanized State in the country, Maharashtra, may face tough competition in its stride towards rapid urbanization from Telangana State soon. Aiming to promote urbanization in a big way, Telangana government has come out with an active proposal to double the number of municipalities (urban local bodies) from the existing 67 (excluding GHMC) to nearly 120 over the next three years. At present, Maharashtra has 26 municipal corporations and 226 municipalities. In Telangana State, the total number of municipal corporations is six and the number of municipalities is 62.

State Municipal Administration and Urban Development (MA and UD) Department has already identified many major panchayats which have eligibility to upgrade as potential municipalities in the future. As per the Census 2011, urban population of Telangana State is 13.61 million representing about 38.67% of total population compared to 31.15% at all India level. The level of urbanization has increased by seven percentage points in the State. Hyderabad is a hundred percent urban district but the city of Hyderabad spreads much beyond the district boundary into the neighboring Rangareddy district. This has made Rangareddy, which surrounds Hyderabad, as the next highly urbanized district in Telangana with 70.32 percent of urban population. The urban population is spread across 68 Urban Local Bodies consisting of 6 Corporations, 37 Municipalities of all grades and 25 Nagarpanchayats. The ten municipalities, which were part of Hyderabad urban agglomeration merged with Hyderabad City Corporation to form Greater Hyderabad Municipal Corporation (GHMC). Most of the proposed ULBs have

been identified in the rural (least urbanised) districts like Nizamabad (having only 4 ULBs), Warangal (only 6 ULBs), Nalgonda (7 ULBs) and Adilabad, Rangareddy and Khammam districts are having seven municipalities each.

While Karimnagar district has the highest number of 11 municipalities in the State, it is followed by Mahbubnagar (10) and in Medak district, the total number of municipalities nine. These three districts along with GHMC have been categorised into highly urbanised districts. The MA and UD officials told The Hans India that the objective behind creation of more number of ULBs is to improve basic infrastructure and make local bodies self-sufficient. A comparative study conducted by the department in the functioning of municipalities and panchayats has revealed that ULBs succeeded in achieving financial targets every year.

### **Hyderabad Metropolitan Development Authority**

Hyderabad Metropolitan Development Authority (HMDA) encompasses a total area of 7228 sq.km covering all 16 Mandals of Hyderabad district, 22 of Rangareddy, 10 of Medak, 5 of Nalgonda and 2 Mandals of Mahabubnagar district. However, the level of overall urbanization is low in the other districts surrounding the GHMC namely Medak, Mahabubnagar, and Nalgonda... Urban development is constrained by in-migration, settlements in slums and their continuous growth, pressure on urban amenities, solid and electronic waste accumulation, pollution, and increasing disparities in living conditions. Smart cities, the emerging concept encompasses information network, communication network, safe drinking water, sanitation, housing for all in green environment and zero open defecation with particular emphasis on participative process of the hitherto neglected population. Mana Wardu - Mana Pattanam - Mana Pranalika Due to rapid urbanization and up-gradation of major Gram Panchayats as Urban Local bodies, a first of its kind programme was launched in the State namely "Mana Wardu - Mana Pattanam - Mana Pranalika" to identify the felt needs of the people. Ward sabhas were conducted in all the ULBs involving all the public representatives and needs of the public at ward level and ULB level were identified and prioritized needs in the focused areas of water supply, roads, drains, sanitation facilities and street lighting etc and future requirements.

It is proposed to meet Rs.1847.76 crore from departmental budget for the year 2015-16 under the scheme of State Finance Commission, internal roads,

assistance to new Municipalities for development works, MEPMA, APMDP etc. The remaining amount is to be pooled up in a phased manner in the next 5 years by tapping funds under 14th Finance Commission grants / departmental budget / special grants. Urban development centered on Hyderabad over the last few decades has eclipsed the growth of other small and medium towns in the Telangana region, leading to “intra-sub-regional disparities”. In the backdrop of the creation of a separate Telangana state.

### Urban Population

| Town/city | Population 1991 | Population 2001 | Population 2011 | % growth 1991-2001 | % growth 2001-2011 |
|-----------|-----------------|-----------------|-----------------|--------------------|--------------------|
| Warangal  | 466,877         | 577,190         | 759,594         | 23.63              | 31.6               |
| Nizamabad | 240,924         | 286,956         | 310,467         | 19.11              | 8.19               |
| Nalgonda  | 20,286          | 19,333          | 15,887          | -4.7               | -17.82             |

*Source: Census of India*

Between 2001-2011, the total urban population of Andhra Pradesh state increased by 36.26% But the population growth in Nizamabad town almost stagnated, and Warangal, the second largest city in Telangana, registered a below average population growth. The Nagarjuna Sagar Project Township of Vijaypuri however saw a steep population decline (Figure 1).

The State government is mulling to bring a new law in place of the existing Urban Areas Development Act which was enacted in the undivided State of Andhra Pradesh. According to the officials of the State Municipal Administration and Urban Development department, the new Act is expected to boost planned development covering all urban and quasi-urban areas, and will enable the districts to formulate an overall uniform development plan. Once the new Act comes into force, each district will have a special master plan for development. The sources said urban planning had now become the main focus of the government besides certain proposed public private partnership (PPP) projects like metro rail, etc, which are underway. While the zonal development plans for cities like Hyderabad are being prepared, the same kind of focus is not being laid on regional planning.

Also, lack of sufficient staff was added to the neglect of this component, the sources added. However, several urban areas in the State are witnessing rapid growth following large number of people migrating to these areas. As a result, regional planning assumes significance on a par with any other municipal corporation and urban local bodies in the State. It is against this backdrop that the newly proposed Act would take care of the issues of regional planning with the preparation of special plans for the development of districts and there would be one Urban and Regional Planning Act covering the entire State. The department has already completed geo-spatial maps for 37 Urban Local Bodies (ULBs) which would be placed in the public domain after taking the approval from the State government. Besides, he said the department had already prepared plans for 200 villages out of the 8,000 villages and 500 mandal headquarters. In addition, the department was also designing master plans for Nizamabad and Bhainsa, Babu added. Furthermore, all the plans prepared by the department will be in GIS mode. Once the data is placed on the public domain, people would be able to access it and raise objections, if any. He said that steps would be taken to finalise the new plans after taking into consideration the objections raised by the people.

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## **Problem of Child Labour in India, a Blatant Violation of Human Rights**

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### **ABSTRACT**

*In the 21<sup>st</sup> century the problem of child labour is a challenge to the human society. All human beings are entitled to live with dignity, for which certain basic rights and freedoms called Human Rights are necessary. Human Rights imply the rights relating to life, liberty, equality and dignity of an individual. These rights ensure that every one is protected against abuses which undermine their dignity and provide the opportunities they need to realize their full potential. It includes civil and political rights such as the right to freedom of expression, the right to freedom of religion, the right to property, the right to privacy and the right to value. It also covers economic and social rights such as the right to an adequate standard of living, the right to adequate food, housing, water, sanitation, the right to education etc. Most of the developing countries of the world including India are facing this tragedy in the form of child abuse and child labour. It is not only affecting under developed and developing countries but the developed countries are also facing the same, though the rate is comparatively less. The foundation of modern human rights is the Universal Declaration of Human Rights (UDHR) adopted in 1948 by the United Nations General Assembly. The core values of the UDHR: - human dignity, fairness, equality, non-discrimination apply to everyone everywhere. The UDHR declares "All human beings are born free and equal in dignity and rights and are endowed with reason and conscience and should act towards one another in a spirit of brotherhood."*

**Keywords:** Child Labour, Violation, Education, development

### **Introduction**

Child labour is a concrete manifestation of violations of certain rights of children and it is recognised as a serious and enormously complex social problem in India. Children are the gift of God to human life for filling the

world with smile, happiness and hope. It is childhood which determines a child's future. Child labour not only causes damage to a child's physical and mental health but also keep him deprive of his/her basic rights to education, development and freedom. The founding fathers of the Indian Constitution have realized it and included it in the constitution as Fundamental Rights and Directive Principles. Child labour includes working children who are certain minimum age and it is one of the worst forms of child exploitation. Child labour has been defined by our constitution as a person who is below the age of 14 years and working for an earning. Child labour in Asia account for the highest percentage of child labour (61%) followed by Africa (32%). Asia is led by India which has 44 million child workers, giving it the largest child workforce engaged in both organised and unorganised sectors. The State wise data of Child Labour is as under:

| Sl. No. | Name of State/UT         | No. of working children in the age group of 5-14 years |             |
|---------|--------------------------|--------------------------------------------------------|-------------|
|         |                          | Census 2001                                            | Census 2011 |
| 1.      | Andaman & Nicobar Island | 1960                                                   | 999         |
| 2.      | Andhra Pradesh           | 1363339                                                | 404851      |
| 3.      | Arunachal Pradesh        | 18482                                                  | 5766        |
| 4.      | Assam                    | 351416                                                 | 99512       |
| 5.      | Bihar                    | 1117500                                                | 451590      |
| 6.      | Chandigarh U.T.          | 3779                                                   | 3135        |
| 7.      | Chhattisgarh             | 364572                                                 | 63884       |
| 8.      | Dadra & Nagar H.         | 4274                                                   | 1054        |
| 9.      | Daman & Diu U.T.         | 729                                                    | 774         |
| 10.     | Delhi U.T.               | 41899                                                  | 26473       |
| 11.     | Goa                      | 4138                                                   | 6920        |
| 12.     | Gujarat                  | 485530                                                 | 250318      |
| 13.     | Haryana                  | 253491                                                 | 53492       |
| 14.     | Himachal Pradesh         | 107774                                                 | 15001       |
| 15.     | Jammu & Kashmir          | 175630                                                 | 25528       |
| 16.     | Jharkhand                | 407200                                                 | 90996       |
| 17.     | Karnataka                | 822615                                                 | 249432      |
| 18.     | Kerala                   | 26156                                                  | 21757       |
| 19.     | Lakshadweep UT           | 27                                                     | 28          |
| 20.     | Madhya Pradesh           | 1065259                                                | 286310      |
| 21.     | Maharashtra              | 764075                                                 | 496916      |
| 22.     | Manipur                  | 28836                                                  | 11805       |
| 23.     | Meghalaya                | 53940                                                  | 18839       |
| 24.     | Mizoram                  | 26265                                                  | 2793        |

|     |                  |          |         |
|-----|------------------|----------|---------|
| 25. | Nagaland         | 45874    | 11062   |
| 26. | Odisha           | 377594   | 92087   |
| 27. | Pondicherry U.T. | 1904     | 1421    |
| 28. | Punjab           | 177268   | 90353   |
| 29. | Rajasthan        | 1262570  | 252338  |
| 30. | Sikkim           | 16457    | 2704    |
| 31. | Tamil Nadu       | 418801   | 151437  |
| 32. | Tripura          | 21756    | 4998    |
| 33. | Uttar Pradesh    | 1927997  | 896301  |
| 34. | Uttarakhand      | 70183    | 28098   |
| 35. | West Bengal      | 857087   | 234275  |
|     | Total            | 12666377 | 4353247 |

It is essentially a rural phenomenon in India, Child labour is generally perceived to be children working for wages in factories, workshops and services that are visible. However, according to various estimates on the incidence of child labour, rural areas account for the largest chunk of child labour in the field of agriculture, and continue as a mass phenomenon, especially in rural areas. It is said that “many of the things we need can wait, but the child cannot wait”. A child is always a child and deserves a childhood free from harm and abuse. Childhood is the most innocent stage where a child is free from all the tension, yet millions of children in rural India are being put to labour at the cost of their childhood.

Children of poorer segment of the rural society remain not only as a cheap source of labour supply for agriculture but also for the non-farm occupations. There are certain non-farm sectors of production in the rural areas that account for a large concentration of children in workforce like beedi making, brick making, stone quarries. In the urban areas they are mainly the street children. In the cities most of the working children migrate from rural areas. Thus child labour is essentially a rural problem and unless the issue of child labour in rural areas is effectively handled it would not be possible to tackle the problem of child labour in India and also in Odisha.

### **Child Labour and Child Work**

Not all work done by children is child labour. The difference between child labour and child work is the difference between labour exploitation and development. Throughout the country, many young children help their families or do part time jobs, they mix education and play with work and such responsibility helps to build self-esteem, confidence and initiative of young people.

But work becomes a risk to children when it interferes with their educations and play. This type of work is exploitative and abusive and a danger to the children's healthy development and future prospects and is called child labour. Work done to help the family in the fields of learning traditional crafts or doing the household works is also called child labour, if it hampers the child healthy physical and mental development. Thus this problem is to be seen from the child rights perspective and this is at the cost of their childhood and human rights. The convention on the Rights of child adopted by the United Nations on 20 Nov. 1989 reaffirms that all the children have rights that must be respected, protected and promoted. However, the realities that the child worker face is a violation of the fundamental rights they are granted.

All children have a right to enjoy their childhood. So it is the denial of childhood, denial of rights to a child. Child labour and exploitation are not only the results of poverty, but also perpetuate poverty. Over population, poverty, parental illiteracy, lack of proper education, urbanisation, availability of cheap child labour are some common causes of wide spread child labour. Causes of Child labour are many. There are various social-economic and cultural factors that force children into work.

### **Why children are pushed into labour?**

Studies in India show that most of working children are drawn from the poorer sections of the society.

- India Human Development Report points out that work participation rate of children is higher among the lower income groups.
- Unequal income distribution and a high dependence on agriculture have high influence on incidence of child labour.
- There is a positive correlation between child labour and drought seasonality, food insecurity and poverty.
- As far as the girls are concerned the ultimate cause of child work is the gender distribution of tasks in rural north Indian society.
- The condition of the girl child is more precarious than a boy. This happy world has a darker side.
- Low adult literacy in general and female literacy in particular, high fertility rates, low adult wages are some of the other factors contributing to child labour in rural India.
- Less than half of India's children between the age 6 and 14 go to school.

- A little over one-third of all children who enrol in grade one reach grade eight.
- At least 35 million children aged 6 - 14 years do not attend school.
- 53% of girls in the age group of 5 to 9 years are illiterate.
- In India, only 53% of habitation has a primary school.
- In India, only 20% of habitation has a secondary school.
- On an average an upper primary school is 3 km away in 22% of areas under habitations.
- In nearly 60% of schools, there are less than two teachers to teach Classes I to V.
- On an average, there are less than three teachers per primary school. They have to manage classes from I to V every day.
- High cost of private education and need to work to support their families and little interest in studies are the reasons given by 3 in every four drop-outs as the reason they leave.
- Dropout rates increase alarmingly in class III to V, its 50% for boys, 58% for girls.
- 1 in 40, primary school in India is conducted in open spaces or tents.
- In Andhra Pradesh (South India), 52 upper primary schools were operating without a building in 2002, while in 1993, there were none.
- In Maharashtra (West India), there were 10 schools operating without a building in 1993, this has climbed to 33 in 2002.
- More than 50 per cent of girls fail to enroll in school; those that do are likely to drop out by the age of 12.
- 50% of Indian children aged 6-18 do not go to school
- Source: 7th All India Education Survey, 2002

According to International Labour Organisation (ILO), if child labour will be banned and all children gets proper education, world's total income would be raised by nearly 22% over 20 years, in other words banning child labour will help in boosting the economy of a country. According to Myron Weiner, an eminent scholar and internationally known author on political change, it is the future of the education system in India that fuels it.

### **What being done to stop child labour?**

By ratifying the UN convention on the Rights of Children (CRC) in 1992 the Govt. of India has committed itself to creating an appropriate environment for survival, protection and development of children. The National Child Labour Policy (1987) and the Child Labour Prohibition and Regulation Act (CLPR)

Act.1986) provide the frame work for Govt's intervention to address the problem. The CLPR Act. Prohibits employment of children in the hazardous occupation and also process Industries that are hazardous to children. The Govt. has initiated action for ratification of ILO Convention No. 182 concerning immediate action for Elimination of the worst form of child labour which covers slavery, sale, trafficking of children or their procurement for pornographic purpose.

The Govt. of India announced the national Policy on Child Labour in August 1987. The multi pronged strategy consists of:

- ❖ Enforcement of child labour laws.
- ❖ Rehabilitation of child labour.
- ❖ Prevention of Child Labour.
- ❖ Improving the economic status of poor parents through various anti poverty and employment generation programmes.

#### **NCLP (National Child Labour Project)**

100 districts of 11 states across the country are identified as child labour endemic districts under the National Child Labour projects. Under the scheme, project societies at the districts level fully funded by the Ministry of Labour Govt. of India for opening special schools/rehabilitation centers for children withdrawn from work. In Odisha, 18 districts covered under this Project and the number of children covered as on March 2003 in 23862. In India the glassware industry in Firozabad employ about 8000 to 50000 children who work in rooms with poor ventilation, broken glass dazzling electric wires and intense heat. At Shiva Kashi in Tamilnadu, 50000 children work with explosive and toxic materials. According to some estimates as many as 1.2 million children being trafficked every year. 30% of India's 9 Million prostitutes are children. Around half of them smuggled from Nepal and Bangladesh. Universal Elementary Education and Elimination of child labour are two sides of the same coin. Education is a key to survival empowerment and social transformation which needed for social change and progress.

#### **World Day against Child Labour**

Since 2003, June 12 has been chosen as World Day against child labour to focus on the urgent need to eradicate child labour. The theme for this year is: - "Justice for children – End child labour" is to highlights the need to protect the rights of the child and eliminate child labour and other violation of fundamental rights of children in all forms.

Every individual and every organization has a role play to improve the current status of their children.

**Be aware**

- ❖ Know and understand the situation of child labour in rural areas. Be aware of their right.
- ❖ There should be identification of child labour intensive blocks through the BPL survey.
- ❖ Formation of SHGs should focus on households that are vulnerable to child labour.

**PRIs**

Panchayat Raj Institutions In general and Gram Sabha in particular could focus on the issue of child labour and see that the benefits under rural development / poverty eradication programmes accrue to the households that are vulnerable to child labour.

**NGOs** – NGOs Integrate action to eliminate child labour with all other developmental activities and involve people in working towards elimination of child labour in rural area. They have a big role play.

The Media – can become a watchdog and highlight the issues of child labour in rural areas rather than focusing just on visible form of child labour.

**Children's Organisations** be aware and raise awareness among other children of the rights of the children.

**Individuals:** Become personally active and responsible for children.

**“Children are the gift of God to human life. It is the childhood which determines a child's future”**

The statement "Children are the future of the nation" stops making sense, then! In fact, it sounds like an ominous prophecy. For how can we explain that even after 70 years of independence, half of India's children are illiterate? Despite identifying primary education as a key thrust area and possessing one of the largest networks of schools in the world? Clearly, we have a lot to answer for. And as concerned citizens do something about it; something meaningful, something concrete, something urgently. No more do we have the luxury of blaming the system or postponing our actions. The time to take collective as well as individual responsibility to remedy the present situation is here.

All Children have a right to enjoy their childhood. Every individual and every organization has a role in it. A systematic and sincere approach is necessary in our society if we want to eliminate this evil completely.

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## Impact of Globalization on Higher Education in Telangana State

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### ABSTRACT

*This paper looks at the state of higher education in India in terms of policies and the trajectory that it has taken in the aftermath of neo liberalization of the economy. Through studying the discourses that construct the edifice of the educational complex in the country, it unravels the dynamics of how economy, politics and education interact. The possibilities of countering the neoliberal offensive of capital and create a more egalitarian higher education system. The education system is thousands of years old and actually hasn't changed much since its early days. Globalization is not going to do anything spectacular either. Standardization of credentials across borders may be the most radical change Globalization is equalizing the education system. People in third world countries know that if they get an education, they can get a job, either at home or in another country. From Dublin to Dubai, opportunities are being found. The reverse of the coin is that as more people have more skills, the value of that skill declines. This is just as true of a computer science engineer now as it was of the people who could use that complex machine, the typewriter, a hundred years ago. The effect on the education system in many places is to turn all education into vocational training. Engineering, computer science, physics.*

**Keywords:** Higher education, neo liberalization, Telangana Universities

### Introduction

In India after independence, there has been tremendous increase in institutions of higher learning in all disciplines. But with the quantitative growth has it been able to attend to the core issue of quality. India is today one of the fastest developing countries of the world with the annual growth rate going above 9%. In order to sustain that rate of growth, there is need to increase the number of institutes and also the quality of higher education in India. To reach

and achieve the future requirements there is an urgent need to relook at the Financial Resource. With the advent of globalization the character of higher education is set of change. Higher education to be meaningful and productive must have avenues for excellence to flourish and develop. There will be a premium on quality with bench making of programmes assuming importance. The impact of technologies will progressively increase. So Indian universities need to look and a head and prepare themselves for far reaching changes. Unless the quality aspect is not taken care of the malady that exists in higher education will never be eliminated. Across the country, a recent survey on higher education by Union HRD ministry – AISHE survey on higher education- has come up with heartening figures. It reveals that more youngsters in the age group of 18-23 years are acquiring higher education and the Gross Enrollment Ratio (GER) in India has risen to 23.6 per cent, out of which 46 per cent students are girls. Statistically speaking, the survey report highlighted the following: India has 757 universities, 38056 colleges and 11922 stand-alone institutions. UP has the highest number of colleges followed by Maharashtra and Karnataka while among districts, Bangalore and Jaipur are ahead of others. In terms of number of colleges per lakh population, the all-India average stood at 26.

The NDA government has also initiated a process of evaluating the quality parameters of its educational institutions, independent of global rankings as it feels our colleges need to have different measurement standards. Debates have been too many on how even elitist institutions of our country, namely the IITs and IIMs, which are now likely to be increased in numbers exponentially, fail to get into the top 100 institutions of the world. In this regard, the Centre's recent decision to select ten higher education institutes having a potential and provide them with substantial funding over the next four years, ranging from Rs.100-500 crore to enable them create world class research infrastructure in laboratories is a welcome step. The National Knowledge Commission, among its many recommendations had even argued for the entry of foreign institutions into India and simultaneously the promotion of Indian institutions abroad.

### **Evolution of Higher Education**

Education is the most vital input for the growth and prosperity of a nation. It provides strength and resilience to enable people to respond to the changing needs of the hour. Education is the backbone of all national endeavors. It has the power to transform human beings into human resources. We cannot build a

sustainable and prosperous nation without human resource development which mainly depends on the health and vitality of higher education. Apart from primary and secondary education, higher education is the main instrument for development and transformation. Higher education has the omnipotent role of preparing leaders for different walks of life: social, political, economic, cultural, scientific and technological. Higher education has special value in the contemporary knowledge society which contributes both directly and indirectly to the wealth of a nation (Report to the People on Education, 2010-11). Rationally, higher education catered to the requirement of few select communities like priests, lawyers and doctors. The objective of higher education was to provide specific skills. During the medieval age emphasis of higher education was laid on liberal arts and study of religion. In the late 70th and 80th century, with the industrial revolution there was a need for education in science and technology. However, during the 20th century, education started acquiring an open character. With a „knowledge force1 “ becoming an essential requirement for national development, there was an increased demand for professional education. With the advent of information and communication technology, higher education saw a paradigm change in both philosophy and pedagogy. In the 21st century, with the impact of globalization, due to increased trade investments and mobility of people across borders, there has been a need to adopt higher education to the changed global reality.

### **Structure of Higher Education in India**

In the Indian system, higher education includes the education imparted after the 10+2 stage. In simple parlance, it is degree education and post degree education which we conduct in our colleges and universities. The professional education like medicine, engineering and technology, law, management, and the like belong to the upper strata of higher education. However, for the present study, the researcher takes the under graduate and post graduate education in arts/ science/ commerce colleges only and the under graduate and post graduate courses run by the affiliating universities, wherever so required.

### **Types of Universities**

The Indian universities are basically of three types- Unitary, Federal, and Affiliating ‘Unitary university’ is one where the entire teaching work is organized within the campus and the students reside in the hostels or within the prescribed geographical jurisdiction of the university has provision for both post graduate and under graduate programmes, and also has a strong

emphasis on research. Aligarh Muslim University, Banarus Hindu University, Mysore University, and Jawaharlal Nehru University are unitary universities. 'Federal university' is one where the teaching work is shared by the university with its constitutional colleges. Delhi University is the only example of a Federal university in India. 'Affiliating university' is one in which a number of colleges under its academic control (not administrative or financial control), distributed over a large area, the whole state, a region of the state or more than one state.

### **Higher Education Scenario in Telangana**

Education in Telangana institutes the educational institutions like University of Hyderabad, Palamoor University, International Institute of Information Technology, Indian School of Business and many other institutions. The population of Telangana accounts for almost half the total population of Andhra Pradesh state. In the year 2011, Andhra Pradesh was included with Telangana. The literacy rate of Andhra Pradesh is 61.11 percent which is less when compared to other southern neighboring states. Comparing other states in South India are Karnataka 67.04 percent, Tamil Nadu 73.47 percent, Kerala 90.92 percent and Maharashtra 77.27 percent.

Education in Telangana has numerous institutes of higher education universities along with numerous primary and secondary schools. The regional and official language of Telangana is Telugu language, English language and Hindi Language. Other linguistic groups in the state include Urdu language. Education in Telangana is offered through a number of institutes spread across the state. In Telangana the education system is of 10+2 system before joining under graduation. First standard to tenth standard classes are conducted by the School Education under the administration of the School Education Department and finally the Tenth Class (S.S.C.) The Public examination at state level is conducted by the Board of Secondary Education. After this two year of Intermediate Education, under the administration of the Board of Intermediate Education the newly formed state in India, Telangana provides reservation in higher education to weaker sections of society on the pattern of Tamil Nadu, by passing the 50% limit.

Telangana, with the capital Hyderabad, has a number of public and private schools and these are either affiliated to the State Board or Central Board of Secondary Education CBSE or ICSE. Some of the most important universities

in Telangana are University of Hyderabad, Palamoor University, Mahabubnagar District of Telangana, International Institute of Information Technology, Indian Institute of Technology, Indian School of Business, Institute of Hotel Management Catering technology and Applied Nutrition, Hyderabad, National Institute of Technology, Warangal of Warangal District, Jawaharlal Nehru Technological University (JNTU), Kakatiya University, Warangal, Osmania University, Hyderabad, Acharya NG Ranga Agricultural University, Telugu University, Hyderabad, English and Foreign Languages University, Hyderabad, NALSAR University of Law, Hyderabad, Birla Institute of Technology and Science and Urdu University of Hyderabad.

Telangana Education is offered through a number of institutes spread across the state. In Telangana the education system is of 10+2 system before joining under graduation. First standard to Tenth standard classes are conducted by the School Education under the administration of the School Education Department and finally the Tenth Class (S.S.C.) Public examination at state level is conducted by the Board of Secondary Education. Higher Education There is 397 Government Junior Colleges and 4 Government Vocational Junior colleges under the administrative control of the Director of Intermediate Education. The functioning of 43 Private Aided Junior Colleges with regard to the Grant-in-aid, service conditions and academic matters for all practical purposes is being looked after by the Director of Intermediate Education. After completing Intermediate Studies (Class 12th) conventional courses in Science, Arts and Commerce and Vocational Courses are offered. 29 Vocational courses are also offered in 588 Junior colleges in the field of Engineering & Technology, Agriculture, Home Science, Para-medical, Business & Commerce and Humanities.

### **Collegiate Education**

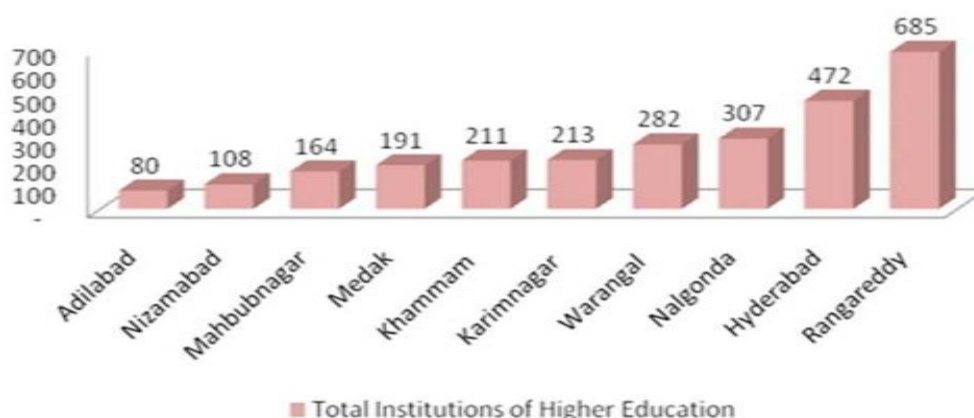
The Department of collegiate education ensures quality, equity and access to higher education for the students. The department monitors academic quality in 126 Government degree colleges and 69 aided colleges existing in the State. The department also looks after the development needs of all Government Colleges. There are 195 degree colleges (126 Government and 69 aided) with 1,46,124 students (87,339 in Government colleges and 58,785 in aided colleges).

### **Technical Education**

The Department of Technical Education is responsible in the state to promote technical education. The objective is to bring out engineers and technicians

with technical knowledge, adequate skills in order to meet the technical skills requirements as per the needs of the industry. There are 1356 Diploma & Degree Level professional Institutions in the State with a total intake of 3,47,950. Telangana faces several challenges in higher education and one of these relate to student's access to Higher Education in the new State. With majority of higher education institutions concentrated in the urban locations of Hyderabad, Rangareddy, and Warangal districts, access to these institutions of higher education for the more populous rural youth, remains a pipe dream.

**The distribution of higher education institutions across the State is shown below**



**Source:** Hans India Daily paper

### **Health and Family Welfare**

There are 4863 Sub-centers, 661 Primary Health Centers, 114 Community Health Centers, 42 Area Hospitals, 8 District Hospitals, 5 Mother and Child Care hospitals and 5 Teaching hospitals apart from 55 Urban Family Welfare Centers, 11 Urban Health Posts in Hyderabad and 87 Urban Health Centers to provide maternal health care, child health care and family welfare services to the people of the State.

### **Reflections on the state of higher education in Telangana**

The Department of Higher Education in the Telangana State deals with college education, technical education and universities. The main objectives of the department should be the development of Undergraduate and Post graduate education, increasing access to higher education, development of

infrastructure in government colleges and ensuring maintenance of high standards of education at all levels. The core point of higher education is a university system, wherein the undergraduate (UG) and post graduate (PG) courses are offered for the award of degrees. Knowledge in several subjects like arts, humanities, social sciences, law, sciences, technology, engineering etc are imparted through coursework. To fulfill the above task we need a large human resource base but when we observe the real fact of universities we can see that we have serious shortages in this area. Osmania is the one of the oldest universities in Telangana, which is short of 452 associated professors and 280 assistant professors out of the 511 and 601 sanctioned posts respectively.

The education administration and academic designations show variations between university and college systems of education. It means less human resource in education dept and uneven distribution of work like, single employee is given a charge of department apart from some responsibility of administration, into departmental works and also works of admin, etc. However the case should be that a faculty should teach students. The number of personnel in Telengana working in the field of education is discouragingly low when compared to all-India data, as periodic recruitment has been absent. It is a well established fact that periodic recruitment maintains quality in teaching-learning process, and the gap in this area has contributed to the deterioration in quality of education. Out of the 11 state universities in Telangana, three have “A” grade and one has “B” grade as per NAAC grading. If the condition of state universities which are under the control of government is so pathetic, what good we can expect. Providing faculty to students is the basic requirement of any educational institution, and if this is not properly done, you can only imagine the state of infrastructure, sports, and laboratories for science departments, hygiene in hostels and other requirements. Without the faculty, who will train the students? Will they get lessons and guidance in canteens and parks of universities?

Higher education starts after the SSC. According to statistics, (TSCHE-*Statistical data of 2015*) there are 10936 higher secondary schools in the state with an intake of 4,999,460 students and 2493 junior colleges with an intake of 378973 students. So what about the remaining 120487 students who has passed SSC? The numbers are dropping at every stage, which indirectly shows increased dropout rates. As far as the faculty is concerned, Telangana has 1839 temporary, adhoc, contract and part time teachers. As mentioned above, large

number of seats remains vacant at the university level as well. Even in professional colleges, more number of seats for students is falling vacant every year. There is lack in mismatch of SSC to intermediate and intermediate to UG, there no even distribution of students from one level to another level. (*No of intake in SSC and intermediate has very big margin, similarly intermediate to degree. Tenth (SSC) intake in state is 49,99,460 and intermediate intake is 3,78,973 where is 50 lakhs and 4 lakhs ratio*). But the TSCHE board still claims they are doing a good job, standardizing assessment procedures and also calling Telangana the Knowledge corridor of the country.

The enrollment data from the year 2014-15 shows that are 7, 55,336 students for various programmes (Ph.D, M.Phil, PG, UG, PG-Diploma, Diploma, Certificate and Integrated), whereas in 2010-11 the number was 12, 12,258. The number of students has actually dropped and the government is still going ahead with its claims of “Bangaru Telangana” on the strength of the quality of its higher education. Students are being certified but employment opportunities have not been created even after the CM of Telangana announced it would be. The interests of students and youth are at stake.

### **Telangana needs higher education reforms**

Telangana government should encourage a broad policy where a PPP model can be pursued. If the primary and secondary education is handled by the government sector, the intermediate and higher education can be entrusted to the private sector, suggests the writer **Rama Krishna Sangem**. The recent fracas about around 25 private engineering colleges being denied affiliation to the Jawaharlal Nehru Technological University (JNTU) has brought into sharp focus the need to take a review at the big picture of higher education in Telangana. The JNTU which conducted inspections on the colleges has also reduced the number of branches and seats in many colleges which were given affiliation. This puts a question mark on the choice of students who got ranks in the Eamcet-2015 and are going to take engineering admission counseling from July 6. If the total number of available engineering seats was around 1.7 lakh last year, it will be less than 78,000 this time. So is the case with the branches as most of the private colleges were denied many branches on the ground that they had no sufficient faculty and labs. Naturally, these college managements have gone to the High Court challenging the arbitrary decision of the JNTU. The college managements argue that they had been given permission to start colleges and courses by the AICTE (All India Council for

Technical Education) and the JNTU has no right to deny affiliation on some flimsy grounds. The advocate general who represented the JNTU has argued that the varsity has every right to deny affiliation to the colleges which lacked faculty and infrastructure. Of course, the court will give its order in a day or two as the counseling dates are nearing. But, what the whole controversy throws up is a bigger debate on the need for comprehensive reforms in Telangana. The higher education till now as the first year of his tenure has gone in other pressing issues like: power supply, sanitation, drinking water, minor and major irrigation etc. It is good that he has given a shape to the sectors and a roadmap has been laid for further growth. Similarly, now is the time for the Chief Minister to pay his attention to the higher education which is in utter neglect all these years. When I say higher education, it doesn't mean that other wings of education like primary, secondary and intermediate education are in great shape. Entire education sector has been looking for some guidance from the Chief Minister. Telangana State Council for Higher Education has been in a limbo since its inception last June as its higher ups don't have any clue on how to function. They cannot conceive a new policy framework nor cling on to the past practices.

The Chief Minister should encourage a broad policy where a public-private partnership (PPP) model can be pursued. If the primary and secondary education is handled by the government sector, the intermediate and higher education can be entrusted to the private sector. At the same time, the private sector shouldn't be allowed to function on its own terms. There can be a regulatory body to fix fees, standards in infrastructure and faculty in private colleges. There can also be an appellate authority to look into the grievances filed by students and parents. This way, Telangana can be a model for the entire country. Moreover, the Chief Minister can also avoid criticism that certain colleges were favored while other was discriminated. KCR should appoint a high level committee to recommend structural changes in the higher and professional education. For example, the AICTE has prescribed norms making it compulsory for each engineering college to have acres of land, while the built up area is less than one tenth of it. Because of that, the colleges were forced to buy valuable agricultural lands. Telangana can set an example by reducing the area needed for a college. This helps us on two counts. First, the lesser can be acquired for a college; also the burden on the student in the form of fee can be reduced. So is the norm for pooling faculty among different college which will help us have more colleges at lesser cost.

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## **Changing Educational Aspirations of Youth Among Muslim Community in Karimnagar District of Telangana State**

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### **ABSTRACT**

*Education is necessity in today's world. It has assumed an increasingly important role in future plans, especially for young people. During the educational process people gain necessary skills and competencies to be able to function on different competitive markets. Higher level of education is associated with higher income, a more prestigious career, lower risk of unemployment and an improved well being. Education is also a key factor in promoting and sustaining economic growth and technological development. The present study was conducted on 518 Muslim community youth from Karimnagar district of Telangana State. The result reveals that there is a significant difference among Muslim community youth with respect to gender and locality.*

**Keywords:** Educational Aspiration, Youth, Muslim Community.

### **Introduction**

“The Goal of Education is the advancement of Knowledge & the dissemination of Truth” *John F. Kennedy*

Education is the single most important instrument for social and economic transformation. A well educated population, adequately equipped with knowledge and skill is not only essential to support economic growth, but is also a precondition for growth to be inclusive since it is the educated and skilled person who can stand to benefit most from the employment opportunities which growth will provide. The Ministry of Human Resource Development has focused on an inclusive agenda, with a vision of realizing India's human resource potential to its fullest, with equity and excellence. In its broader sense, education is a lifelong process, which starts with conception and ends with death. Education, in its wider sense includes all the influences which upon an individual goes on increasing his knowledge and learns through his experiences and contacts with environments. Education, such as, is

not teaching or learning of 3 R's --reading, writing, recurring. It consists of development of 4 H's --- head, heart, hand and health. Education, in the broader sense, includes all the knowledge and experiences, acquired during infancy, childhood, adolescence, youth, manhood or old age through any agency of education the schools, home, society etc. In the wider sense, all experiences said to be educative, life is education and education is life. Whatever broadens our horizons deepens our insight, refines our reaction and stimulates thoughts and feeling educates us. To attain higher education one has to go through the long process which start from the primary school enrolment, with in this process only a minority reach to the higher education and rest of the majority get eliminated, Indeed it is accepted that, the higher education is one of the important means of social mobility and human development. The development of a community is depended upon the educational attainment that a community make, which start from the literacy level to higher educational attainment. There is a scarcity of studies of the higher educational attainment separately for Muslims, but Sachar Commission has made an assertion which is more or less the reality. Muslims in India perform very weak in all the human development indexes compared to their other counter parts, they rank considerably lower than national averages and in higher education indices they are even below the Scheduled Cast and Scheduled Tribes.

The Justice Rajinder Sachar Committee was commissioned in 2005 by Indian Prime Minister Manmohan Singh to prepare a report on the latest social, economic, and educational conditions of the Muslim community of India. This report highlighted issues facing the Muslim community and their representation in Indian public life, but it has faced criticism for some of its recommendations and methodology. The Sachar Committee Report estimated that the Muslim proportion will stabilize at between 17% and 21% of the Indian population by 2100. This study seeks to explain the educational aspirations of Muslim youth. The present work attempts to throw light on the Changing Educational Aspirations of Youth Among Muslim Community of Karimnagar District in Telangana.

### **Objectives**

1. To study the educational aspirations of Muslim Community with respect to gender in Karimnagar district of Telangana state.
2. To study the educational aspirations of Muslim Community with respect to locality in Karimnagar district of Telangana state.

### Hypothesis

1. There is a no significant difference in the educational aspirations of Muslim Community with respect to gender in Karimnagar district of Telangana State.
2. There is a no significant difference in the educational aspirations of Muslim Community with respect to locality in Karimnagar district of Telangana State.

### Sample of the Study

The sample consisted of 518 Muslim community youth of Karimnagar district of Telangana State, India. The sample was collected through random sampling technique.

### Tool of the Study

Questionnaire prepared by the Researcher containing 90 questions on 3 point scale. The tool was standardized by establishing reliability and validity.

### Analysis and Interpretation

**Hypothesis 1:** There is a no significant difference in the educational aspirations of Muslim Community with respect to gender in Karimnagar district of Telangana State. To test the above hypothesis chi-square was employed to test the divergence of observed results from those expected on the hypothesis of equal probability of distribution of trait in the sample.

**Table 1**  
**Distribution of scores of gender wise**

| Sample size | Frequency | No  | Yes | Neutral | Chi-square value |
|-------------|-----------|-----|-----|---------|------------------|
| 518         | Fo        | 137 | 342 | 39      | <b>*11.513</b>   |
|             | Fe        | 200 | 172 | 146     |                  |

\*significant at 0.01 level - Df = 2, p at 0.01 level of significance

The above table gives the educational aspirations of Muslim Community with respect to gender. It is clear from the table that distribution of scores of gender in the educational aspirations of Muslim Community sample was not found to be normal, as the chi-square value was significant at 0.01 level of significance. On the basis of this the Hypothesis - 1 stated as 'There is a no significant difference in the educational aspirations of Muslim Community with respect to gender in Karimnagar district of Telangana State is **rejected**. Therefore, it can be concluded that majority of the sample was clear in accepting the role of gender as significant in the educational aspirations among Muslim Community.

**Hypothesis 2:** There is a no significant difference in the educational aspirations of Muslim Community with respect to locality in Karimnagar district of Telangana State. To test the above hypothesis chi-square was employed to test the divergence of observed results from those expected on the hypothesis of equal probability of distribution of trait in the sample.

**Table 2**  
**Distribution of scores locality wise**

| Sample size | Frequency | No  | Yes | Neutral | Chi-square value |
|-------------|-----------|-----|-----|---------|------------------|
| 518         | Fo        | 212 | 241 | 65      | <b>*13.554</b>   |
|             | Fe        | 232 | 236 | 50      |                  |

\*significant at 0.01 level

Df = 2, p at 0.01 level of significance

The above table gives the educational aspirations of Muslim Community with respect to locality. It is clear from the table that distribution of scores of locality in the educational aspirations of Muslim Community sample was not found to be normal, as the chi-square value was highly significant at 0.01 level of significance. On the basis of this the Hypothesis - 2 stated as 'There is a no significant difference in the educational aspirations of Muslim Community with respect to locality in Karimnagar district of Telangana State is **rejected** as majority of the sample was clear in accepting the role of locality as significant in educational aspirations among Muslim Community.

### Findings

1. There was a significant difference in the educational aspirations of Muslim Community with respect to gender in Karimnagar district of Telangana State.
2. There was a significant difference in the educational aspirations of Muslim Community with respect to locality in Karimnagar district of Telangana State.

### Conclusion

The result reveals that there is a significant difference among Muslim community youth with respect to gender and locality.

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## **Generation of Employment through Mgnrega: A Study in Kalahandi District of Odisha**

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### **ABSTRACT**

*MGNREGA play a crucial role in generating employment opportunities in the rural areas of India. The Act aims at providing at least 100 days of guaranteed wage employment in a financial year to every adult members of the household in the rural areas, who are interested to do unskilled manual work. Under this backdrop, the present study tries to find out the role of MGNREGA in generating employment in Kalahandi district of Odisha. The hypothesis of the study shows that whether or not the MGNREGA has provided sufficient employment to the growing unemployed households in the study area. The study is based on secondary data for the period from 2012-13 to 2016-17. The secondary data are elicited from various articles, journal, books and official website of MGNREGA. In order to draw the inference of the study, simple statistical tools like table, diagram, average and percentage are employed. The study found that employment generation through MGNREGA in Kalahandi district has not been satisfactory because the persondays of employment creation, average days of employment and number of households got 100 days of employment are much low in accordance to the targets of the scheme.*

**Keywords:** MGNREGA, Employment Generation, Kalahandi

### **Introduction**

India is still in the trap of vicious circle of poverty. In this context, low investment leads to low employment, which again leads to low income and low saving. It is in practice in all parts of the country. In order to break up this circle, several plans and policies have been formulated and implemented in the country by the Government of India after the five year plan was introduced. In the successive five year plans, employment generation is the ultimate

objective. In fact, poverty is the outcome of unemployment. There is an indirect relationship between employment generation and poverty. This connotes that an increase in employment generation leads to reduction of poverty. It is observed that in the fifth five year plan (1974-79), the priority was given on reduction of poverty. Thereafter, several poverty alleviation programmes and employment generation programmes have been implemented in the country in order to eradicate the poverty. The incidence of poverty in India has sharply come down from 37.2 % in 2004-05 to 21.92 % in 2011-12 while in Odisha; it has also slipped down from 57.20 % to 32.59 % during the same period (Odisha Economic Survey, 2016-17). This sharp reduction of poverty was due to intervention of the centre and state through different programmes. Among these programmes, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) plays an important role in the context of poverty reduction (breaking up vicious circle of poverty) along with ensuring sustainable development through creation of physical assets. This programme intervenes the circle by injecting an investment into it. With the implementation of the programme (2006), the inflow of more investment leads to more employment creation, which again leads to higher income and saving. In this way, the scheme supposed to break up the vicious circle of poverty with its injective weapon of investment. In the union budget 2017-18, the Government has allocated the amount of Rs. Rs.48,000 crores for MGNREGA as against Rs.38,500 crores in 2016-17 for rural development. It is the highest ever allocation towards the scheme, which would generate huge employment opportunities in the rural areas of the country (Tripathy, Kurukshetra Journal, March 2017).

MGNREGA is a paradigm shift from the previous wage employment programmes. It was implemented first in rural districts of the country on 2nd February, 2006. The Act guarantees to provide at least 100 days of wage employment in a financial year to every adult members of any rural household who are willing to do unskilled manual works at the minimum wage rate. Besides, there is also a provision under the scheme that at least one-third (33 %) beneficiaries shall be women who have registered and requested for work. Apart from generation of employment, the scheme also aims at eradicating of mass poverty, curbing rural-urban migration, protecting environment, empowering rural women and making the villages self-sustaining through creation of durable physical assets such as land

development, irrigation, afforestation, water conservation and road construction. Thus, the Government of India has referred to it as an "**Act of the people, by the people and for the people**" (Sourav Das, 2013).

### **MGNREGA in Odisha**

In Odisha, MGNREGA was introduced in three phases as like at national level. In the first phase, it was launched in 19 districts (2006), then extended to 5 more districts in the second phase(2007) and the remaining 6 districts were covered under the scheme in the last phase(2008) as given in the following Table-1.

**Table 1**  
**Districts under different phases of MGNREGA in Odisha**

| Phase                              | Name of districts covered under MGNREGA                                                                                                                                                   | No of districts |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| First(2nd Feb. 2006)               | Bolangir, Boudha, Deogarh, Dhenkanal, Gajapati, Ganjam, Jharsuguda, Kalahandi, Kandhamal, Koraput, Malkangiri, Mayurbhanj, Nabarangpur, Nuapada, Rayagada, Sambalpur, Sonepur, Sundargarh | 19              |
| Second(1 <sup>st</sup> April 2007) | Bargarh, Anugul, Balasore, Bhadrak, Jajpur                                                                                                                                                | 05              |
| Third(1st April 2008)              | Nayagarh, Kendrapada, Jagatsinghpur, Puri, Cuttack, Khorda                                                                                                                                | 06              |
| Total                              |                                                                                                                                                                                           | 30              |

Source: [http://nrega.nic.in/MNREGA\\_Dist.pdf](http://nrega.nic.in/MNREGA_Dist.pdf) accessed on 20 March, 2017

### **Study Area**

**Odisha** is one of the poorest states of India. The state of Odisha is located on the eastern part of the country along the Bay of Bengal. It is bounded by Andhra Pradesh in South, West Bengal in the North, Jharkhand in the North West and Chhattisgarh on the West. Spread over 1.5 lakh sq.km and is home to 36 million people, the state is divided into 30 districts for administrative purpose. Odia is the local language with a number of dialects of the same. Odisha is home to some of the primitive tribal communities of our country and about one-third of the area is under forest. Primarily Odisha is an agrarian economy where 60% of the population still depend on agriculture and allied activities for livelihoods.

**Kalahandi** is one of the infamous districts of KBK region. Kalahandi is the 7th district in terms of size and also 11th in terms of population. Kalahandi is the 23rd urbanised district in state having only 7.74 percent of its population live in areas as against 16.69 percent of state's population living in urban

**Table 2**  
**Major demographic features of Kalahandi and Odisha (As per the Census 2011)**

Source: Census of India 2011

### Map 1: Districts under different phases of MGNREGA in Odisha



There are several research studies have been done by many researchers on different aspects of MGNREGA programme. But the present study is developed with the support of reviewing some previously studied literatures related to employment generation through MGNREGA. Some of them are as followed.

Prasad(2012), in his study made an attempt to examine the performance of MGNREGGA in India and found that the employment provided to households has increased from 3.39 crores in 2007-08 to 5.49 crores in 2010-11 and during the same period person days generated has also risen from 143.59 crores to 257.15 crores. Moreover, the study revealed that although the total fund available has been rising persistently over the period, but the percentage of expenditure against available funds has been fluctuating over the period. Besides, it was also found that the total works taken has augmented from 17.88 lakhs in 2007-08 to 50.99 lakhs in 2010-11. Finally, the study concluded that the overall performance of MGNREGA has been growing over the year. Biswas (2012) made a study in Jalpaiguri district of West Bengal and found that the performance of MGNREGS is satisfactory during the financial period from 2006-07 to 2009-10. The number of households provided 100 days of employment was also found much satisfactory. Further, the study highlights the district is emphasizing more on flood control, rural connectivity and land development which are much essential for overall development of Jalpaiguri district. Eventually, the study concluded that the MGNREGS is not only providing wage employment but also ensuring sustainable solutions to all problems in the district.

In their study on "Appraisal of Processes and Procedures of NREGA in Odisha: A Study of Mayurbhanj and Balasore District of Odisha" Nayak and et.al (2011) found that on an average, about 69% of the respondents have reported that there has been an acceleration in employment generation on account of implementation of the NREGA programme and about 54 % have revealed that migration has come down after implementation of the scheme. Harisha, Nagaraj, et al.(2011), conducted a study in Chikmagalur district of Karnataka during 2009-10 by using primary data only. They used t-statistics and multiple regression model to analyze the data . The study revealed that out of the total number of days worked in a year, the workers were engaged in their own-firm for about 30% of the days, 54% of the days in outside own-firm and 16% under MGNREGA programme. The ratio of the own-firm working days to the number of days worked under MGNREGA was 1.9 reflecting for every two days of work in their own-firm is equal to only one day of work under MGNREGA programme. They concluded that the MGNREGA has positive impact on generation of employment and income particularly during the lean season.

Shenbagar and Arockiasamy (2013), attempted to assess the impact of MGNREGA on the employment and income of the households in Thoothukudi district of Tamil Nadu . The study was carried out with only secondary data available through DRDA section of the districts. In the study, they found that a large number (76.95%) of beneficiaries got employment but less than 20 days in a year and almost 80% of beneficiaries earned less than Rs 2000/- per year through the MGNREGA scheme. Thus, the study revealed that the scheme has created employment opportunities only for a limited number of days and the earning of the households was very less.

Santosh Kumar(2014), in his research paper entitled "Role of MGNREGA in Rural employment: A Review" has used exclusively secondary data and found the facts that on an average five cores households have been provided with employment every year since 2008. Furthermore, 51% of the total person-days has been generated to SC and ST while 47% to women under the scheme, which is well above the mandatory 33% as required by the Act. Finally, he concluded that the MGNREGA has positive impact on rural areas in term of creating employment opportunities and providing livelihood facilities to the beneficiaries.

A study made by D. Bhaskar (2014) examined the implementation and achievement of the MGNREGA programme and also its impact on migration of labour from rural areas. He carried out his study by using secondary data from 2006-07 to 2010-11 and found that the MGNREGA has generated about 2.1 crore of wage employment in 2006-07 and then increased to 5.9 crore in 2010-11. Further, it was observed that at national level, the average wage paid under the programme has increased from Rs.65 to Rs.120 during the financial year 2006-07 to 2010-11. He concluded that this programme has successfully achieved in providing employment, higher wage, reduction of distress migration and assets creation. Keshlata and Fatmi (2015) made an attempt to assess the impact of MGNREGA on socio-economic well being of scheduled tribes in Sheopur district of Madhya Pradesh. In the study, the progress of MGNREGA was examined in two ways; physical progress and financial progress. Under physical progress, a decline was seen in terms of the person days and employment generated for the scheduled tribes. Under financial progress, the number of social audit, total available funds declined from the financial year 2012-13 to 2013-14. The study concluded that due to the lack of awareness about the MGNREGA programme, the socio-economic conditions of the scheduled tribes was not good.

### Objective of the Study

The objective of the paper is to study the role of MGNREGA in generation of employment in Kalahandi district of Odisha.

### Research Methodology

The present study is mainly based on secondary data collected from various reports of MGNREGA, research papers, journals and official website of MGNREGA. The data has been extracted from the financial year 2012-13 to 2016-17. In order to analyse and draw the inference of the study, descriptive statistics such as table and simple statistical tools like average and percentage have been employed.

### Results and Discussion

The performance of MGNREGA is reflected in term of job card issues, employment provided to the households in a financial year, number of households provided 100 days of employment, person days created, total fund available, total expenditure and total works completed. The performance of MGNREGA in Odisha during the financial year from 2012-13 to 2015-17 is depicted in Table 3.

**Table 3**

#### **Overview on the progress of MGNREGA in Odisha (2012-13 to 2015-16)**

| Indicators                                   | 2012-13   | 2013-14   | 2014-15   | 2015-16   | 2016-17   |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Total Job cards issued (in lakhs)            | 63.05     | 63.57     | 65.08     | 66.65     | 64.02     |
| Total number of active job card* (in lakhs)  | 20.78     | 25.81     | 25.37     | 30.65     | 28.72     |
| Employment provided to HHs (in lakhs)        | 15.99     | 17.10     | 14.69     | 19.97     | 19.92     |
| Average days of employment provided to HHs   | 34        | 41        | 36        | 44        | 38        |
| Average wage per person(Rs)                  | 124       | 141       | 161       | 188       | 171       |
| HHs Completed 100 days of Wage Employment    | 75,038    | 1,56,781  | 82,022    | 1,97,468  | 35872     |
| Total Persondays generated (in lakhs)        | 546.01    | 711.82    | 535.40    | 894.52    | 776.40    |
| SC person days (in %)                        | 17.6      | 16.35     | 15.82     | 15.91     | 16.10     |
| ST person days (in %)                        | 37.69     | 40.82     | 41.56     | 41.73     | 37.85     |
| Women person days (in %)                     | 35.57     | 33.57     | 33.78     | 38.02     | 39.82     |
| Total fund available (in lakhs)              | 104497.21 | 136499.87 | 111097.57 | 205910.58 | 207353.75 |
| Total expenditure (Rs. in lakhs)             | 117766.55 | 128316.66 | 106245.17 | 205201.16 | 214326.35 |
| % of expenditure out of total fund available | 112.7     | 94        | 95.63     | 99.6      | 103.36    |
| Total works completed                        | 62826     | 69074     | 49665     | 125771    | 252074    |

Source: Official website of MGNREGA ([www.nrega.nic.in](http://www.nrega.nic.in)).

Note: the figures in parenthesis show percentage, \* Any individuals of households has worked any one day in either last three financial year or in current financial year.

SC=Scheduled Caste, ST=Scheduled Tribe HHs= Households.

It is apparent from the table that the performance of MGNREGA during the study period has been improved significantly in quantitative term. The total job cards issued has been increased from 63.05 lakhs in 2012-13 to 66.65 lakhs 2015-16 and then declined to 64.02 lakhs in 2016-17. Similarly, the total active job cards also augmented from 20.78 lakhs in 2012-13 to 30.65 lakhs in 2015-16 and then reduced to 28.72 lakhs in 2016-17. The employment provided to households(HHs) was 15.99 lakhs in the financial year 2012-13, which has augmented to 19.97 lakhs in 2015-16 and then reduced marginally to 19.92 in 2016-17. There has been an improvement average days of employment provided to households over the year from 34 in 2012-13 to 44 in 2015-16 except the year 2014-15 in which it was declined to 36 because of less works done due to much less allocation of fund. However, it has come down to 38 days in a financial year in 2016-17. The percentage of expenditure out of fund available is satisfactory as fund utilisation has been persistently above 94 % throughout the financial year and it was highly rated to 103.36 % in 2016-17. As far as generation of persondays of employment to HHs is concerned, the MGNREGA scheme has significantly progressed from 546.01 lakhs in 2012-13 to 894.52 in 2015-16. But, the persondays of employment declined to 776.40 lakhs in 2016-17.

Within the different social groups Scheduled Caste's share in the total persondays has reduced from 17.6% in 2012-13 to 15.91 % in 2015-16 and then increased to 16.10 % in 2016-17. So far as ST category of workers are concerned the share to the total persondays generated has consistently increased from 37.39 % in 2012-13 to 41.73 % in 2015-16 but after that it has marginally slowed down to 37.85 % in 2016-17. Similarly, with regards to persondays generated by women workers under the scheme, their share has mounted ( above 33 %) consistently throughout the study period (2012-13 to 2016-17). This connotes that the participation of ST and women workers is rising while that of SC workers is falling in the MGNREGA works. As far as SC and ST are concerned, ST workers participate more than SC workers in the scheme. The total number of works completed under MGNREGA was 62826 in 2012-13, which has increased to 252074 in 2016-17.

**Table 4**  
**Employment Generation in Odisha under MGNREGA (2012-13 to 2016-17)**

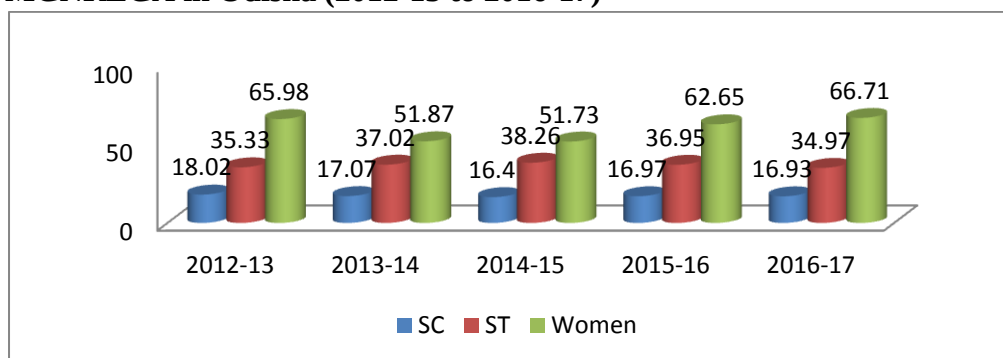
| Year    | Employment provided to HHs (in lakhs) | Average day of employment provided per HHs | Person days generated (in lakhs) | No. of HHs Provided Employment (in %) |       |        |       |
|---------|---------------------------------------|--------------------------------------------|----------------------------------|---------------------------------------|-------|--------|-------|
|         |                                       |                                            |                                  | SC                                    | ST    | Others | Women |
| 2012-13 | 15.99                                 | 34                                         | 546.01                           | 18.02                                 | 35.33 | 46.59  | 65.98 |
| 2013-14 | 17.10                                 | 41                                         | 711.82                           | 17.07                                 | 37.02 | 45.78  | 51.87 |
| 2014-15 | 14.69                                 | 36                                         | 535.40                           | 16.40                                 | 38.26 | 45.26  | 51.73 |
| 2015-16 | 19.97                                 | 44                                         | 894.52                           | 16.97                                 | 36.95 | 46.01  | 62.65 |
| 2016-17 | 19.92                                 | 38                                         | 776.40                           | 16.93                                 | 34.97 | 48.08  | 66.71 |

*Source: www.nrega.nic.in*

The Table-4 shows the caste wise employment generation in Odisha. It is clear that the average day of employment per household was 34 in 2012-13 and then it increased to 41 in the next financial year. However, the average employment day was subsequently declined to 36 in 2014-15 because of bumper crops and availability employment during the period. There was a noticeable augment of average employment day in 2015-16 as the state faced with severe drought situation. However, it has declined to 38 days in 2016-17. It is also noticed from the table that the percentage share of SC(Scheduled Caste) workers received employment is relatively lower than ST and others category in every year. The percentage of employment generated to ST workers under MGNREGA has increased from 35.33% to 38.26% from 2012-13 to 2014-15 respectively and then lessened to 36.95% in 2015-16. This has further declined to 34.97 % in 2016-17.

The workers other than SC and ST have participated in the works on an average 46% which is closer to the half of total households worked under MGNREGA. The participation of women under MGNREGA works was 65.98% in 2012-13, which slipped down to 51.87% and 51.73% in the next two subsequent financial year and then triggered to 66.71 % in 2016-17. This implies that the percentage of women workers participated in the MGNREGA works is much higher than the normative (33 %) number women workers being allowed as per the provision of MGNREGA. In term of participation of women workers in the works, the scheme has successfully performed in the state of Odisha.

**Fig.1: Employment Generation (in %) to SC,ST and Women under MGNREGA in Odisha (2012-13 to 2016-17)**



Source: Construction by the author from the data available at [www.nrega.nic.in](http://www.nrega.nic.in)

It is apparent from the above fig-1 that the percentage of employment generated to SC labourers are much lower than ST and women workers. It is further noticed that the participation of women workers is above the SC and ST workers in the MGNREGA works. This is because the women workers mostly stay at home in the villages and they are interested to do unskilled works under the scheme. Further, they want to supplement the income to the family for maintaining their livelihood.

**Table 5**  
**Generation of Employment in Kalahandi under MGNREGA during Financial Year 2012-13 to 2015-16**

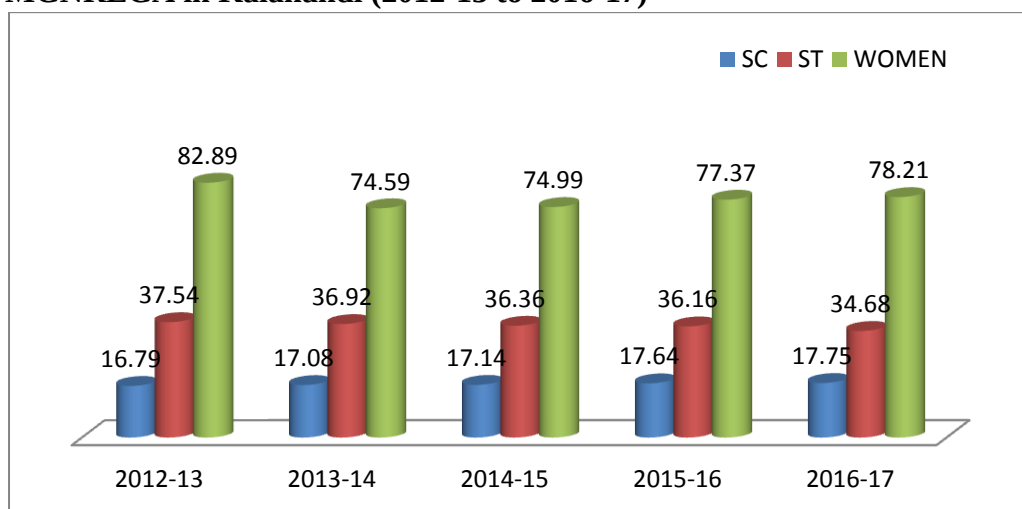
| Year    | Employment provided to HHs | Average day of employment provided per HHs | Person days generated (in Lakhs) | No. of HHs Provided Employment (in %) |       |        |       |
|---------|----------------------------|--------------------------------------------|----------------------------------|---------------------------------------|-------|--------|-------|
|         |                            |                                            |                                  | SC                                    | ST    | Others | Women |
| 2012-13 | 74599                      | 35                                         | 26.11                            | 16.79                                 | 37.54 | 45.66  | 82.89 |
| 2013-14 | 84918                      | 42                                         | 35.73                            | 17.08                                 | 36.92 | 46.00  | 74.59 |
| 2014-15 | 64877                      | 34                                         | 22.30                            | 17.14                                 | 36.36 | 46.49  | 74.99 |
| 2015-16 | 93177                      | 38                                         | 35.81                            | 17.64                                 | 36.16 | 46.19  | 77.37 |
| 2016-17 | 86249                      | 30                                         | 26.32                            | 17.75                                 | 34.68 | 47.56  | 78.21 |

Source: [www.nrega.nic.in](http://www.nrega.nic.in)

As the table-5 indicates that the average day of employment per households has increased significantly from 35 in 2012-13 to 42 in 2013-14 and then

followed a sudden down trend in the next financial year. Thereafter, it went up to 38 days in 2015-16 and then declined to 30 days in 2016-17. This implies that the average days of employment provided per households has been fluctuated during the period from 2012-13 to 2016-17. It is also noticed that the percentage share of employment to SC workers is on an average 17% while that of ST workers is 36% throughout the financial year, which together constitutes about 53% reflecting a half of the total employment. In Kalahandi, the employment share of women participation under MGNREGA work is of 82% in 2012-13. But its percentage declined to 74.9 % in the next successive two financial years (2013-14 and 2014-15). This connotes that the participation of women workers under the scheme is fully satisfactory.

**Fig.2: Employment Generation (in %) to SC, ST and Women under MGNREGA in Kalahandi (2012-13 to 2016-17)**



Source: [www.nrega.nic.in](http://www.nrega.nic.in)

It is quite apparent from the figure-2 that the percentage of employment generation to SC workers is significantly the lowest among different category of workers. But the participation of ST workers is marginally lower than general workers whose percentage of employment is well above the SC and ST labourers at a constant rate throughout the financial year. Furthermore, the participation of women workers is much satisfactory because their percentage share is above 74 % throughout the financial year (2012-13 to 2016-17). It can be concluded that women participation is much higher than male workers in the MGNREGA work.

**Table 5**  
**No. of Households completed 100 days of Employment in Kalahandi and Odisha (2012-13 to 2016-17)**

| Financial Year | Number of Households completed 100 days of employment |        |
|----------------|-------------------------------------------------------|--------|
|                | Kalahandi                                             | Odisha |
| 2012-13        | 3695                                                  | 75038  |
| 2013-14        | 8461                                                  | 156781 |
| 2014-15        | 2034                                                  | 82022  |
| 2015-16        | 6092                                                  | 197468 |
| 2016-17        | 653                                                   | 35872  |

*Source: www.nrega.nic.in*

As per the provision of MGNREGA, every registered household to be provided at least 100 days of employment in a financial year. In this connection, the present study tries to find out the number of households provided 100 days of employment in Kalahandi district vis-a-vis Odisha state. The number of households provided 100 days of employment in the study are reflected in Table 5. It is clear that during the financial year from 2012-13 to 2016-17 the number of households provided 100 days of employment is found to be fluctuated. About 3695 households have got 100 days of employment in 2012-13 in Kalahandi district. It has considerably increased to 8461 households in 2013-14 and then drastically declined to 2034 households in 2014-15. After that it has immediately augmented to 6092 households in 2015-16. However, it has ever declined significantly to only 653 households in 2016-17. This drastic reduction of number of households completed 100 days of works is due to low allocation of funds and most of the households were discouraged to do work under the scheme due delay wage payment. Since, the rural households are poor and they do maintain their livelihood with their daily wages, so they do not want to wait for more than 15 day to receive their wages under the scheme. This delay wage forced them to migrate to the different urban area in search of jobs.

So far as providing 100 days of employment to the households in Odisha is concerned there is a fluctuation of the number of households completed the works for 100 days during the same financial year. It is observed that about 75038 households got 100 days of employment in 2012-13. It has significantly increased to 156781 households in 2013-14 financial year. However, the trend slipped down to 82022 in the next financial year and then again augmented

sharply to 197468 households in 2015-16. Thereafter, it has sharply declined to 35872 households in 2016-17.

### **Conclusion**

MGNREGA play a crucial role in generating employment opportunities in the rural areas of India. The Act aims at providing at least 100 days of guaranteed wage employment in a financial year to every adult members of the household in the rural areas, who are interested to do unskilled manual work. Under this backdrop, the present study tries to find out the generation of employment in Kalahandi district of Odisha during the financial year from 2012-13 to 2016-17. The study shows that employment provided to the households was 74599 in 2012-13, which has marginally increased to 86249 in 2016-17. Further, it is found that the average days of employment provided per households is between 30 - 42 days, which is much less than the prescribed 100 days as per the Act. So far as persondays of generation is concerned about 26.11 lakhs persondays was created in 2012-13, which increased to 26.32 lakhs in 2016-17 except two financial years 2013-14 (35.73 lakhs) and 2015-16 (35.81).

This implies that persondays generation in the district is not satisfactory. With regards to providing 100 days of employment about 3695 number of households have got 100 days of employment in 2012-13, which has drastically declined to 653 households in 2015-17. However, in the financial years 2013-14 and 2015-16, about 8461 and 6092 households respective, have got 100 days of employment under the scheme. The study also highlights that above 74 % of women workers have participated in the scheme which is much satisfactory. From the above analysis, it can be concluded that the MGNREGA has not been successful in generating employment in Kalahandi district because the average days of employment and 100 days of woks provided to the households are much lower than the target of the scheme. The present study is confined to only one district i.e. Kalahandi, but it can be extended to other districts of the state or the study can be done in other states of the country. Besides, the present study is also limited to the period from 2012-13 to 2016-17, but it can be taken other time period from the financial year 2006-07.

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## A Cultural Study of the Temples of Inscriptions and Temple Architecture of Kolanupaka

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### ABSTRACT

*Temples today are regarded primarily as places of worship but a thousand years ago, they were centers of local administration. Temples, which catered to the local community, holds the answer on their walls. "There are more than a thousand temples in Telangana, which have inscriptions. These writings on the walls have absolutely nothing to do with religion or philosophy. Every letter on the walls of these temples has social, economic, legal and political decisions taken by the community. What the government provides today, the temples used to do that in the bygone days - taxes, administration of water bodies and common resources, education and job opportunities. Temples were also centers of cultural activities and social interactions. "Temples were seats of art and culture. The inscriptions speak about the dancing women, who were the temple's wealthiest patrons, who founded the capital expenditure. The gifts given to the temple by the dancers were also recorded in the inscriptions. Kolanupaka second capital of the Kalyani Chalukyas during the 11th century, boasts of a 2,000-year-old temple adorned with beautiful images of the Jain tirthankaras, besides a 5-foot-high statue of Lord Mahavira carved out of emerald, the only one of its kind in the world.*

**Keywords:** Kolanupaka, Kalyani Chalukyas, Someswara, inscriptions

### Introduction

Temples are the holy places where God is worshipped in His various images. They dominate the ancient monuments of our country belonging to different regions and periods. The temples in South India are the only ancient religious institutions that have retained their importance and popularity down through the ages. Patronized both by the royalty and the public, they have preserved the age-old traditions and have fostered arts of different kinds in a remarkable

way. Temples have been installed according to Agama Sastra based on mythology. The Sthalapuranam, legendary history of sacred places has given the particular significance of each temple with the chronology of the distinguished divine persons who performed miracles and conducted penance in the temple. Temples were built for different purposes. Being a visible emblem of the religion, philosophy and ethics of the people, the temple played a role far more vital than any other institutions. The great builders and artists sought self expression through conformity to tradition rather than originality of the expression.

There are number of ancient historical sources available in India. Ancient Sanskrit, Pali Indian and non-Indian literature, inscriptions, coins, sculpture material and painting remains, description of foreign travelers, different materials which has been got by excavation etc Through these sources we can collect the information about the ancient history. In these sources inscriptions are very import to collect the information. If we study these inscriptions carefully, we can collect the information about the political religious, social, historical and economical condition of ancient India as well as details, traditions, Literature, scripts and administrative system. Inscriptions have been also helped to study of painting, sculpture and literature. Inscriptions are contemporary that's why inscriptions are trustworthy. Because of all these reasons number of India and foreign scholars have studied that inscriptions and published it. Kolanupaka second capital of the Kalyani Chalukyas during the 11th century, boasts of a 2,000-year-old temple adorned with beautiful images of the Jain *tirthankaras*, besides a 5-foot-high statue of Lord Mahavira carved out of emerald, the only one of its kind in the world.

During the 11<sup>th</sup> Century this village was a religious centre of Jaina faith and ranked as one among other great Jaina centres like Ellora, Patancheru, Kopbal etc. An ancient Jaina temple of Svetambaras has been recently restored and put under worship. An inscription on a pillar to the west of the Someswara Temple on a mound which is known as Oobadibba which is also described as Manasthambha or Kirtisthambha executed during the reign of Lord Tribhuvanamalla Someswara (which has an inscription on all the four sides of the monolithic pillar) registers the gift of the village Panupura to the Goddess Ambika Someswara erected this Victory pillar after his Victory over the "Lord of Trikalanga". This Manasthambha was caused to be erected in the shrine of Goddess Ambika by Perggade Kesiraja, Officer in charge of the religious

establishments, who was himself a devout Jain. The structure has beautiful images of the Jain *tirthankaras* inscribed on its walls. There are horse cart rides available around this temple. The carts charge 50 to take you inside the village of Kolanupaka where there is a famous temple dedicated to Lord Shiva and a museum that has remains from the Kalyani Chalukya era.

Literary evidences show that it was one of the great centers of Saiya religion. Shadakshara's "Rajasekhara Vilasam" mentions "Kollipaka" as the birth place of Renukacharya. He was one of the great Vira. Saiva. Saints and believed to have born from the Svayambhu Linga at Kolanupaka and absorbed again into it after preaching Vira Saivism for a long time. Shadakshara informs us that Tenukesa had a son called Rudra Munisvara whom his father had installed as the Guru of Saiva religious order. Tenukesa was one of the five great preceptors of the Lingayat sect. He had constructed a matha at Kollipaka and made his son Rudra Munisvara its head. The author, Shadakshara himself traces his descent from Cikkavira Deva who is believed to have been born in Rudra Munisvara's lineage along with Uddana Gandabisvara, Annadanisa and Revanasiddhavara.

The Vira Saivite tradition also has it that Renukacharya was no other than Revanasiddha who taught Agastya - the sage of Pancavati - the doctrine of Sata Sthala etc., as embodied in the Siddanata Sikhamani. He is also said to have presided over the ceremony of consecration of three crores of lingas. The above account suggests that Kolanupaka was one of the Saiva .religious centres during the medieval period.

### **Objective of study**

1. To study of administration and political condition of the solapur district with the help of research inscription.
2. To focus on religious, social and economic life with the help of study of inscription
3. To show the culture and literature of Yadadri Bhongir disttict. through the inscription
4. To imply utility of new information through study to become useful for history.
5. To suggest the protection, conservation and research of inscriptions of Yadadri Bhongir disttict.

Jagadekamalla I was succeeded by Somesvara I, Ahavamalla (1042 A.D.) in whose reign Rajadhiraja I, won a victory at Dhannada over prince

Vikramaditya's, (later Vikramaditya VI) army and having invaded Chaluk-yan territory he set fire to Kollipakai. In the year 1068 Somesvara II succeeded his father and ruled for 10 years upto 1078. This reign passed uneventfully so far as the region of Kollipaka is concerned. Next came Vikramaditya VI in 1076 who ruled for half a century in whose period Kollipaka enjoyed peaceful life.

There are six inscriptions of this king in Kollipaka. The earliest epigraph issued in 1088 A.D. mentions the King's feudatory, Maharnandalesvara Tondarasa Chola Maharaja who was ruling the province of Kollipaka seven thousand. It records a gift of land and other gifts to the god Uttaresvara by this chief and other officials. The receiver of the grant was Ramesvara Pandit of Kolanupaka lineage. The next inscription dated in 1097 A.D. mentions the gift of the village to the god Svayambhu Somesvara of the capital Kollipaka. Another inscription gives the name of another feudatory, Mahamandalesvara Kondaya Chola-deva Maharaja who was ruling the province of the Kollipaka seven thousand.

This epigraph records a gift to the god Vishnu by this chief. The fourth inscription dated in the 29th Chalukya Vikrama year Corresponding to 1104 A. D, contains that while Jaggadeva of the Paramara family was ruling the province Kollipaka as Mahamandalesvara, the Kings general Somala Danda Nayaka holding the designations Great Minister and high officer incharge of peace and war constructed the temple of Jaggaddeva Narayana in his capital Kollipaka for the prosperity of the kingdom. The fifth inscription issued in the Chalukya Vikrama year 31 (1107) informs us that Anantapala Dandanayaka had gifted income derived from certain specified taxes to the god Jaggadeva Narayana of the capital Kollipake. The last inscription dated 1125 A.D. registers the Ambika of the locality Ambaratilaka, situated in his capital Kolliipake by Mahamandalesvara Chalukya Ganga Pernadi Kumara Somesvara at the request of Sayinayya, army commander of Kollipaka two thousand. One more inscription coming from Gudur in Nalgonda District gives reference to Dandanayaka Savipayya, a subordinate officer of prince Somesvara holding charge of the region Kollipaka two thousand. After the Chalukyan Empire had vanished Kollipaka seems to have passed into the hands of Kakatiyas who flourished in the beginning as subordinates of Western Chalukyas of Kalyani. An inscription of Rudradeva's time dated 1181 A.D. was found at Maripirala. The reading of this inscription and another of the time of Rudram-ba found at Kollipaka leads us to believe that Kollipaka

lost its ancient glory and status of the Western Chalukyan times and ceased to be headquarters of governors. As their capital Warangal is very near to this place, the Kakatiya monarchs probably did not find it necessary to have a provincial headquarters at this place. In subsequent years it gradually lost prominence, but survived through, as evidenced by the paintings of later period in the Somanatha temple and existence of a living village instead of becoming a defunct one.

### **The Study Area in Kolanpaka Temples**

The village Kolanupaka is situated in Nalgonda District at a distance of 7 k.m. to the North-west of Alair, a station about 80 k.m., from Secunderabad on Secunderabad-Vijayawada Railway line to reach this historic place there is a regular bus conveyance from Alair. The name of the village seems to have undergone modifications in the course of centuries. Lithic records at Tadi Maling in the Tirumakudal Narsipur Taluq of Mysore, issued in the 10th regnal year of Rajendra Chola<sup>1</sup> pronounce the name as "Kollipakkai". Another inscription<sup>2</sup> found on the bronze bell found in the bed of the river near the same village and two other inscriptions<sup>3</sup> one of Jagadeka Malla and the other Trailokya Malla of Western Chalukyan dynasty mention the word "Kollipakeya" which is a Kanarese version of the name of that village. The Moripirala" inscription of the time of Rudra-deva of the Kakatiya dynasty mentions the name in Telugu as "Kollipaka." By the time of Sadasivaraya of Vijayanagara, the name got corrupted into "Kolpaka"<sup>5</sup> and is now known as Kulpak or Kolanupaka.

### **Sculpture**

The amount of importance attached to either mass or space in the design of sculpture varies considerably. In Egyptian sculpture and in most of the sculpture of the 20th-century artist Constantine Brancusi, for example, mass is paramount, and most of the sculptor's thought was devoted to shaping a lump of solid material. It is one of the plastic arts. Durable sculptural processes originally used carving (the removal of material) and modeling (the addition of material, as clay), in stone, metal, ceramics, wood and other materials but, since Modernism, there has been an almost complete freedom of materials and process.

**1.Lintel.** on either side of the lintel piece there are relief carvings which are described as follows:

(a) *Gajalakshmi*: Lakshmi image which is carved in the centre of the lintel is a seated figure in Padmasana holding Lotus in both the hands coming up to the shoulder level. She has Kiritamakuta and is decked with all the ornaments. An Elephant on either side pours water on the seated goddess. From the style it may be dated to 11<sup>th</sup> Century A.D.

(b) *Daks Mnamurthi*: on the other side of the panel, Dakshinamurthi is represented. He is attended by two devotees. This belongs to 11th Century A.D.

2. *Kosthapanjara*: The Kostha relief is in three tiers. There is no central image in the Kosthapanjara, though space is provided. This may belong to 10th and 11th Centuries A.D.

3. *Parswcmatha*. this is an image in Kayoth-sarga. Unfortunately the image is mutilated below the knee. Even the snake hoods are mutilated. The hair is in ringlets as if it is dressed with a brush. It wears a fine polish. The Thirthankara image in black basalt may belong to 10th Century A.D.

4. *Dhwajasthambha*. This is the Dhwajasthambha of the Someswara Temple. There is an inscription of the Telugu characters of the 15th Century A.D. It mention a Jayasthambha and Yallapa son of a Resberla Gane (?)

5. *Ganapaihi*. Just before the two Dwarapals at the entrance to the temple there are two Ganapathis without a crown eating sweet balls. The two belong to the 12th Century A.D. (Pl. II).

6. *Anjaneya*. Just before the Dhwajasthambha we have an Anjaneya. He is having a Gada in his right hand and the left hand is in Chinmudra.

7. This is an oblong panel showing a standing deity holding snake and trisula in his upper hands. The lower right is rested on gada and the left akimbo (Katyavalambita). He is adorned with armlets, bracelets, upavita and big earrings. The carving is modern.

8. *Nataraja*: This is a very beautiful image of Siva in Tandava. He is dancing on Apasmarapurusha. He has ten hands. Both the principal hands are in the dance pose. The other hands hold the following weapons: danda, trisula, Pasa, Damaru, Khadga, Disc, Chakra and Snake. There is perfect ornamentation of the Chalukyan period. It is in bas relief in whitish granite.

9. *Mahisamardini*: This four handed goddess has a tail of the buffalo, sword and disc in clockwise direction. The sword is thrust into the head of the buffalo.

expression is glaring. The carving is modern. The goddess is adorned with anklets, Mekhala, loose bracelets armlets, Khantaharas, and earrings. Ha o on theback apsidaland rayed. Her Karanda-maluta is truncated. Her ensemble consists of a Urubandha, *i.e.* close-fitting drawer (Modern).

10. This is a free standing sculpture of Yali Mriga with its tail upraised and twirled on its back. The bulging eyes, grinning mouth and small ears are quite characteristic to the animal. It is in couchant posture and looks to the side by turning its neck. Its right foreleg is raised. No ornamentation.

11.**Virakal:** This is an alto-relievo of an elephant. The elephant is well adorned with all trappings. The rider is missing upto waist.

12. **Couple:** This is an alto-relievo of a man and woman riding a well trapped elephant. The couple is under a shade which looks like a snake hood. The rider holds sword (goad?). His face is damaged. His hair is knotted into a sikha. His Katibandha holds a sheath. The facial features of the woman are lost. (PI. IV)

13.**Chowri Bearer:** The lady with flywhisk is standing in a very elegant mood. The Bhanga and the facial expression recall the Ajanta paintings. This is a 11th Century piece.

14. This is an oblong panel showing Nagini standing. The Kirita is conical. The other ornaments are the same as in No. 29. The harahas a loop down the breasts. Her hands hold sword and shield. She is shaded by a snake hood of three heads (Late Chalukyan?).

15. **Bhairava:** Siva (Bhairava) is in nude. He has four hands, and holds Khadga, Trisula....and Kapala. This belongs to the 12th Century A.D.

16.**Mahisamardani:** standing in tribhanga this goddess tramples Mahisasura. Over conventionalisation in the carving of the tribhanga posture has made this sculpture a poor specimen though the ornamentation and chiselling are quite unmistakably of the Chalukyan period. The pearl set ornaments that swarm over the body of this goddess create an impression that in the late Chalukyan style there seems to be a predilection for over ornamentation relegating the slender form into unimportance. The image is carved of a well polished, fine-grained black basalt, but is weather beaten and here and there upbraded as well. The goddess holds in her two left hands bow and shield while the third one is broken upto elbow point.

17. *Chamundi*: this goddess is comparatively of greater dimensions. Carved in whitish granite, this four-handed goddess holds Damaruka and Kapala in her left upper and lower hands and sword and Trisula in the right lower and upper hands. Seated cross-legged, the emaciated body of the goddess is awe-inspiring with the chiselling out the ribs and bones of her person. The receding stomach, pendant breasts, grinning mouth, big ears, with distended lobes, the dishevelled hair and the Mukhapatta bordered with human heads indeed create a frightful appearance. In addition a Kapala serves as Chudamani accentuating the fearsome feelings. She is adorned with a broad necklace, Naga armlets and ear ornaments. There are no anklets on her legs. Kapalas are strewn together to form her Upavita. A snake serves as Kuchabandha and another as Mekhala of three strands. The whole bony structure and the peculiar ornamentation truly make the sculpture very interesting one of 10th Century A. D.

18. *Mahisamardani*: The goddess is killing Mahisa, and the human form is emerging out of the buffalo. The image is badly mutilated. It belongs to the Chalukyan period of the 12th Century A.D.

19. *Viragal*: (Elephant Rider) This is an oblong panel showing an elephant rider. Around him the panel is decorated with adufoil pattern torana set 011 two pillars. It constitutes a beautiful frame and background to the rider. The elephant is well trapped and carved in good relief. The rider holds a sword which is damaged. The facial features and hands are abraded. His hair is combed and arranged into side-knot (sikha). An inscription probably belonging to the 13th or 14th Century is carved on the base and it records the name of one Lenka Anna-yya. The date also is given but abraded. The lines are in disorder and considerably damaged making decipherment difficult.

20. *Saptamatrikas*: This is a very big Saptamatrika slab and is well preserved. The seven goddesses are flanked by Vighnesa and Virabhadra. One after one is described below. *Veerabhadra*: He holds Trisula, Vina and Rosary in his four hands. He is adorned with anklets, armlets, bracelets, earrings, rosary-beaded haras and pearl Mekhala is carved below. His Jata Jata is loose.

*Brahmi*: Her cognizance, swan, is carved below. She holds Kalasa, fruit and noose and displays Abhaya mudra with her fourth hand. Anklets, armlets, bracelets, earrings, long Kara, necklace and Katibandha bedeck her body. Her head is adorned with Karandamakuta. *Maheswari*: Bedecked in same ornaments and clad also in similar ensemble this goddess holds Trisula, fruit

and Damaru in her three hands displaying her fourth hand in Abhaya mudra. Her cognizance, bull is carved beneath.

*Kaiunari:* She holds Sakti and fruit in her two left hands and Vajra in her right upper hand displaying Abhaya mudra in her lower right hand. Her Vahana peacock is carved below. *Vaishnavi:* Adorned with same ornaments as the other deities, this goddess carries Sankha and fruit in her left two hands and disc (aflame) and Abhaya in her right arms. Garuda in Alidasana is seated below.

*Varahi:* Showing a small stick-like object, fruit, Abhaya and vessel in her hands, the goddess Varahi is seated next to Vaishnavi with her cognizance Mahisha below her seat. Her face is slightly damaged. She is clad in the same ensemble as Vaishnavi and adorned with similar ornaments. *Indrani:*—She holds goad, fruit and Vajra and displays Abhayamudra with her hands. The elephant, Airavata, is shown below. Some ornaments and drapery appear on her person also.

*Chamundi:* she carries Trisula, fruit and Damaruka in her hands and displays Abhayamudra with her fourth hand. An Upavita of Kapalas adorns her. The rest of the ornaments and drapery are similar to those worn by other deities. The symbol fox appears below her seat. *Ganesa:* With his Vahana, rat, below, the god of obstacles holds in his hands goad, Modakas, Danta and Tava-Ia. Karandamakuta adorns his head, Snake serves as Udarabandha. Upavita and other ornaments as usual adorn his person.

All Saptamatrikas are carved with halos of the same apsidal shape and adorned with Karandamakuta. The ensemble of these goddesses consists of a single lower garment reaching more or less upto calves. Ornaments also are of the same type. The carving of the thorax portion into two divisions and the lines that raise above the navel, Thrivali marks to distinguish the stomach from the chest are quite typical of the late Western Chalukyan style. Most of the Jaina carvings exhibit these lines in the 12th Century and 13th Century Sculptures. The receding band below the seats, bears four petalled lotuses and are typical to other Chalukyan carvings (late Chalukyan style).

21. *Bhadra Kali:* this is an apsidal panel carved with the image of Bhadra Kali. She carries in her upper hands Damaruka and Trisula while displaying Abhaya with her lower right, the lower left being broken upto elbow. Nandi is carved at the bottom left and Vinayaka on the right side. The drapery consists of

a lower garment which reaches upto calves and a short patka comes out from the central waist knot.

22. *Naga Stone*: This is Naga shown in anthropomorphic form upto navel and below navel with the body of a snake. The Naga hero is holding sword and shield in his hands. He is adorned with Manimaya Kirita and other ornaments. Two snakes on either side of him span the panel vertically and shade the Naga hero with their hoods (Late Chalukyan).

23. On the lower portion of this oblong panel is carved an equestrian with spear in his hand. The upper portion has a couple seated on horse holding their hands in Anjalimudra. An umbrella shades them. The horse is well adorned and the rider is carved in profile of perfect visibility. This may be put to 12th or 13th Century A.D.

24. *Parvati*: This is the bust of a deity, carved in round about 12th Century A.D. The lower portion upto waist and hands are broken. She is adorned with Karanda-makuta and jewelled head filled with Mekhala with Kirthi-mukha beautifying her waist.

25. In this damaged panel Somesvara is on the right (in the complete panel he forms the central figure) having three heads. The god Somesvara holds Trisula in his upper left, and a receptacle (?) in the lower left while carrying snake in the upper right and displaying Ahhaya with the lower right hand. On his right side is Vishnu holding his lower hands in Anjali and slightly turning towards Somesvara. He holds Sankha and Chakra in his upper hands. The seating postures, quite interestingly exhibit their profiles of perfect visibility and spatial conveniences. God Vishnu is adorned with Manimaya Kirita. His Vahana Garuda is carved below. All the three (including Brahma) figures are seated and Siva's importance is emphasized by placing him in the centre and treated in the aspect of Somesvara. This sculpture seems to have certain important bearing on the temple of Somanatha in the outer varandah of which this sculpture is now deposited, (Western Chalukyan style) of the 8th Century A.D.

26. This is a panel showing the image of a deity who could not be readily identified. He holds a staff in his hand with its tip shaped in the form of Panavatta. In the other hands he holds Kalasa and noose, displaying Abhaya in the fourth hand. He possesses beard and Jata-Juta. He is adorned with Mekhala badged with Kirtimukha, and other ornaments like pearl necklaces and

bracelets. The knees are also embellished with Kirtimukhas. The image may be that of a Dwarapala of Siva or Brahma (Kakatiyan style).

27. *Kosthapanjara*: this is another one similar to item No. 5, but this is a more perfect and a more complete sculpture in the sense that the central recess is carved. Umamaheswara is carved as the central figure in the recess. This is also a perfect Chalukyan piece of the 12th Century A.D. (Pl. VI)

28. *Surya*: This is an image of Surya whose head is unfortunately broken. He is in Samapadhashtanaka posture holding two lotuses in his two upraised hands making the lotuses to cross shoulder-level as laid down in Agama Sastras. A median loop extends over the thighs tied to Katibandha. The carving seems to be of the 12th or 13th Century A.D.

29. This is a Nagini stone with half human and half serpentine form. A snake hood shades her. She is holding sword and shield in her hands. A long Hara, single cord, bracelets, armlets, and a Mekhala of single cord adorn her person. She is wearing Karandamakuta. The snakes are sculptured lengthwise on her either side (Modern).

### Inscriptions

Indian inscriptions engraved into stone or other durable materials, or etched into metal, are an important historical source beginning from the 11<sup>th</sup> century. The inscriptions of the rulers of ancient Telangana constitute the most reliable source material for the study of history of the period. Inscription literally means any writing engraved on some object and epigraphy is the study of inscriptions. Inscriptions are usually engraved on permanent materials. Durable non-metallic and metallic objects were used as base to make the writings long lasting.

The inscription was issued by two rulers viz., Tribhuvana Malla and Jagadeka Malla (1076-1127 and 1015-1042): It is done in Kannada characters. It mentions the gift of a land to a Chandrasenacharya probably a priest of the Jain Temple. This is an inscription of Vikramaditya VI, 1099 A.D. during his 22nd regnal year, 55. This is an inscription issued by Tailapa III (1151 - 56). This is badly damaged. Another inscription issued by Tailapa II in 991 A.D. This is an inscription issued by Tribhuvana Malla Deva VI (1076-1127 A.D.) in Kannada script, mentions Kumara Someswaradeva with all his titles and mentions some gift of land. Another

Inscription of the Kalyani Chalukyas in Sanskrit. In Inscription of Tribhuvana Malla (1076-1127), records the gift of some incomes to a Reddy of Kolanupaka. An inscription of Tailapa (973-997). Another Inscription of Tribhuvanamalla. A Sanskrit inscription of Rudra Deva which records the gift of a subordinate of the king of the Kolli-paka to Svayambhu Manikyathirtheswara for the worship of the God twice a day, 13th Century A.D. There is an inscription on a stone opposite to the Sanctorum of Chandikamba Temple with the Lord Someswaradeva, Temple complex of the Kakatiya Ganapathi Deva in Telugu characters. It is incomplete. It refers to Kakati Ganapathi Deva as Anumakonda Puravara ruling from Anumakonda. A subordinate whose name is lost has made some gift to the God. There is another inscription on the wall of the tank of the Someswara Temple belonging to Trailokya Malla of the Western Chalukya dynasty in Kannada script. It is badly damaged and fragmentary. It starts with the well known Chalukyan Prasasti-Manavyasa Gothram etc., and usual titles of the Trailokyamalla Deva from the Neievidu of Kalyanapura.

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## Higher Education in the Digital Age: An Indian Perspective

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### ABSTRACT

*Challenges before Indian higher education inevitably focus on the issues of access, equity and excellence within the demographic constraints. There are large and very heterogeneous numbers of potential students that need to be addressed. The ranges of skills desired are overwhelming, given the availability of infrastructure, allocation of funds hand in hand linguistic and socially diversified population of our country. With all above odds, in reality there is need to way forward to handle these situations. The ubiquity of the internet and the ease of online communication, notably via email and social networking sites, have enabled the sharing of information in unprecedented ways. The low cost of communication has made access to this information simpler and more democratic. Consequently the role of a teacher, and indeed the classroom itself, needs to evolve in order to recognize and accommodate the changed landscape of communication. There also needs to be a significant investment in education technology, to learn what can be done, and to determine the most effective ways of achieving these goals. Any solutions that we choose to follow will need money and imagination, and will also demand careful planning. It is in this context that our entire university system needs to pay more attention to the evolving global trends in order to give Indian the higher education system it requires in the digital age.*

**Keywords:** *demographic constraints, diversified population, social networking sites, education technology, digital age.*

### Introduction

Challenges before Indian higher education inevitably focus on the issues of access, equity and excellence within the demographic constraints. There are

large and very heterogeneous numbers of potential students that need to be addressed. The ranges of skills desired are overwhelming, given the availability of infrastructure, allocation of funds hand in hand linguistic and socially diversified population of our country. With all above odds, in reality there is need to way forward to handle these situations.

### **Nature and Delivery**

As the requirements for higher education- and indeed the demand for access to higher education-both increases, we are now at a critical juncture in the evolution of the nature of higher education as well as its delivery. There is a crisis brewing, one of the main reasons for which is the radical change that has occurred in the past decade or so in the nature of communication and information exchange and transfer. This has consequently had an impact in the nature of pedagogy. The ubiquity of the internet and the ease of online communication, notably via email and social networking sites, have enabled the sharing of information in unprecedented ways. The low cost of communication has made access to this information simpler and more democratic. Consequently the role of a teacher, and indeed the classroom itself, needs to evolve in order to recognize and accommodate the changed landscape of communication.

### **Future in India**

What lies ahead? At the present time, as the university grants commission turns 60, there are something like 700 universities in India and 35,000 colleges, all devoted to delivering higher education (Sharma 2014). The total student enrolment of about 23 million translates into a present gross enrolment ratio (GER) of about 18%, and the major challenge is to increase this number to around 30% in the next decades. This increase in the GER, given the increase in population corresponds to around 100 million students and it is clear that the traditional university system is simply incapable of absorbing this increase. This leads to the question of whether a standard university education system is essential, or can we perhaps devise different and more effective models of instructions that can help achieve the desired outcomes? One such direction is “skills development” that has been touted as the need of the day, to see that India can provide the world with well-trained workforce. The national vocational education qualification framework (NVEQF) has been set up to ensure this, but the challenges are formidable. The required investment in the infrastructure to provide technical instruction that can lead to

such a skilled workforce is largely absent. Radical departures from the standard model seem essential if we are to even begin to address this problem in a meaningful way. The fact that the distance mode naturally has a larger multiplier- one teacher can, in principle, educate a limitless number of students – makes it important to also consider how those aspects of education that judge outcomes, such as tutorials, examination and certification, need to adapt to these times if we are to pursue this model seriously.

### **New Missions**

An important step has been setting up of the national mission on education through information communication technology (NMEICT) and the ambitious national knowledge network (NKN), that aims to connect as many of the educational establishments in India as possible. The UGC has the *e-pathashala* programme whereby lectures in a wide range of subjects are being prepared for online transmission. While these are welcome developments, it should be added that there has been little research into how this form of distance instruction could be made effective so as to have the outcomes that are desired.

### **Online Learning and Teaching**

The ongoing developments in the online landscape, in particular the massive open online courses (MOOCs) hold some answers for us and suggest other directions that need to be pursued. The internet is a great equaliser, and the easy availability of both information and instruction has been making inroads in the Indian educational system.

### **Need To Blend The Old Model With Digital Mode Of Education**

It would not be appropriate to claim the new model is complete in itself. Different subjects have their own requirements and their own paradigms; different skills need to be assessed with separate yardsticks. Nevertheless, some attempts need to be made to blend such models of instruction with the more traditional methods if we are to be able to even begin to cope with the numbers being contemplated. The role of technology also has to be seen in context-there are still places in the country where internet access is slow and sporadic. And more importantly, we need to keep in mind the limited access that most of our citizens have to one of the most essential human rights, the right to education. And therefore it is imperative that there be sufficient and intensive research in the pedagogy that the new technologies demand, keeping

in mind the particulars of who is being educated, and for what. There (was and still) is a need to Indianise the whole educational system. It is not clear that this advice has been heeded seriously in the past: particularly with globalisation, there has been a tendency to internationalise all our education and especially higher education. However, as the digital age makes further inroads in to all aspects of our public and private lives, this basic truth needs to be reiterated if the Indian higher education system is to successfully serve the growing needs of the nation.

There also needs to be a significant investment in education technology, to learn what can be done, and to determine the most effective ways of achieving these goals. Any solutions that we choose to follow will need money and imagination, and will also demand careful planning. It is in this context that our entire university system needs to pay more attention to the evolving global trends in order to give Indian the higher education system it requires in the digital age.

## Urban Poverty Alleviation Programmes in India

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### ABSTRACT

*The poverty alleviation programmes in India can be categorized on the criteria whether or not it is targeted for rural or urban areas. Most of the programmes are designed to eliminate rural poverty because poverty is relatively high in rural areas. In addition, targeting of the poverty is challenging in rural areas due to various geographic and infrastructure limitations. The programmes can be mainly grouped into 1) Wage employment programmes, 2) Self-employment programmes, 3) Food security programmes, 4) Social security programmes and 5) Urban poverty alleviation programmes.*

*Major target of these programmes is aimed at the development of rural areas. Infrastructure such as roads to connect the village to different area, which make the village more accessible besides other social, educational institutions and infrastructure like hospitals. Another, objective is to give out sustained wage employment. The Govt. of India identified the challenges of urban poor by making every possible endeavour by means of a number of programmes in order to make the urban cities inclusive, productive, resourceful as well as convenient. It has also been suitably planned and being implemented with a policy that the sustainability of urban development is possibly achieved only when shelter is provided to the urban poor, urban basic services, financing urban development, governance and micro level planning.*

**Keywords:** *poverty alleviation programmes, development, empowerment*

### Introduction

This paper presents briefly an overview of the poverty alleviation programmes of the government of India to acknowledge that the government machinery have been harnessed continuously to eradicate poverty in the country. Evaluation of policies and programmes of the government from time to time gives an understanding that they are for the most part designed to deal with the

three key vulnerabilities which could be stated in brief as occupational vulnerability, residential vulnerability and social vulnerability. Though these programmes were designed and implemented in isolation initially, the importance of community centric implementation and social mobilization have been identified as the key to success and the government in the recent introduced convergence of social development programmes on one end and also to achieve convergence and coordination between the state government departments so as to achieve the vision of inclusive growth as envisioned in the 12th Plan.

These Programmes are summarized so as to realize as to how some of the programmes could not give way to expected results because of definite administrative and institutional limitations leading to a reliable inference that the administrative reforms at least at this stage are inevitable. Consequently, an effort is being made to identify such gaps that acted as an obstacle in implementation at various points of time, and to recommend guaranteed administrative reforms for optimum productivity and utilization of funds.

Some of the under mentioned urban poverty alleviation programmes that were introduced from the year 1958 to till date are examined in this study. It is also important here to state that a large amount of these programmes were formulated with the assistance of different international organizations like ODA/DFID, UNICEF, etc. However the following are well known among them.

1. Urban Community Development Programme (U.C.D.P), 1958.
2. Environmental Improvement of urban Slums (E.I.U.S), 1972.
3. Urban Basic Services for the Poor (UBSP), 1986.
4. Self Employment Programme for the Urban Poor (SEP-UP) 1986.
5. Nehru Rozgar Yojana (NRY), 1989.
6. Urban Basic Services for the Poor (UBSP), 1990.
7. Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUPEP), 1995.
8. National Skill Development Policy
9. National Slum Development Programme (NSDP), 1996.
10. Swarna Jayanthi Shahari Rozgar Yojana (SJSRY), 1997.

### **Scope of the paper**

The paper consists of five sections

1. The development of strategy of India and poverty reduction
2. Urbanisation in India: Urbann community development

3. Statistical findings on India's urbanisation and poverty scenario
4. Significance of some programmes for urban development
5. Review of literature
6. Conclusion

### **1.0 The development strategy of India and poverty reduction**

The hallmark of India's development strategy was modernisation through industrialisation. Emphasis was given on state-led industrialisation, with all industries and sectors like steel, mining, machine tools, chemicals, telecommunications, power plants, etc. as well as trade and finance were reserved for the public sector. The second FYP strongly emphasised on technology and capital intensive heavy industries to achieve rapid industrial growth, which in turn is the pre-requisite for overall economic development. Another important area of India's development strategy was the policy towards international trade and finance.

#### **1.1 India's Development strategy**

Strategy refers to the methods adopted for attainment of a specific objective. Strategy of development, therefore, deals with the long term policies formulated to attain the stated objectives of the Five-Year Plans. This strategy also determines the pattern of investment in the economy to achieve the national objectives. Singh.N, 2009

#### **1.2 Post-Independence Development Strategy**

The broad objectives that guided India's development strategy were:

- ❖ achievement of a high rate of economic growth, which would lead to a sustained improvement in the standard of living of the population
- ❖ reduction in inequalities and more especially an accelerated effort to remove poverty at a pace faster than would be achieved solely through the normal growth process
- ❖ development of a mixed economy with a strong public sector, especially in key areas of the economy
- ❖ achievement of a high order of self-reliance
- ❖ promotion of balanced regional development, with a narrowing of economic difference across regions, and finally
- ❖ These social and economic objectives were to be pursued in the framework of a constitutional democracy (Ahluwalia, 1998).

India's search for development could be perceived as an effort to create a nation state and a national market out of a civilisation that is profoundly stratified and heterogeneous in terms of caste, religion and regional affinities. Therefore, its modest accomplishments perhaps represent work in progress. Yet, in comparison to its neighbours who attained political independence around the same time, the 'idea of India'- as a society and economy-has perhaps take a deeper root with a district identity, aided and abetted by evolving democratic ethos and a homogenising popular culture.

### **1.3 Poverty reduction**

India has avoided some of the worse-case scenarios of developmental disasters. It has abolished famines, attained food self-sufficiency, and brought down the popular growth rate without coercion. The state led heavy industrialisation during the first three decades, followed by a gradual loosening of investment and output controls, has created diversified and flexible industrial and services sectors(with increasing openness to trade and finance) that seem capable of responding to market signals, giving rise to a domestic entrepreneurial class that is quickly internationalising its business. India has witnessed changes in its policy regimes, from the state-centric import substitution strategy to an increasingly market-driven one with export orientation .After remaining intractably high at 50-60% of the population, absolute poverty (head count ratio measured in real money terms) has nearly halved in the last.

Poverty alleviation has been one of the guiding principles of the planning process in India. The role of economic growth in providing more employment avenues to the population has been clearly recognised. The growth-oriented approach has been reinforced by focusing on specific sectors which provide greater opportunities to the people to participate in the growth process. The various dimensions of poverty relating to health, education and other basic services have been progressively internalised in the planning process. Central and state governments have considerably enhanced allocations for the provision of education, health, sanitation and other facilities which promote capacity-building and well-being of the poor. Investments in agriculture, area development programmes and afforestation provide avenues for employment and income. Special programmes have been taken up for the welfare of scheduled castes (SCs) and scheduled tribes (STs), the disabled and other vulnerable groups. Antipoverty programmes that seek to transfer assets and

skills to people for self-employment, coupled with public works programmes that enable people to cope with transient poverty, are the third strand of the larger anti-poverty strategy. The targeted public distribution system (TPDS) protects the poor from the adverse effects of a rise in prices and ensures food and nutrition security at affordable prices.

## **2.0 Urbanisation in India**

Urbanization or urban drift is the physical growth of urban area as a result of global change or the increasing proportion of the total population becomes concentrated in towns. India's Urban population is currently around 30 percent of its total population. Experience across the world has been that as economies grow, rapid urbanization takes this proportion to over 60 percent before it begins to stabilize. As such, it is projected that India's Urban population would grow to about 473 million in 2021 and 820 million by 2051, as against only 285 million in 2001. In terms of percentage of total population the urban population has gone up from 17% in 1951 to 29% in 2001 and is expected to increase up to around 37% by the year 2021. Consequently, the number of metropolitan cities with a population exceeding one 2021.

### **2.1. Urban Community Development (UCD)**

Community Development is mainly defined as "The process of developing active and sustainable communities based on social justice and mutual respect. It is concerned with influencing power structures to eradicate the obstacles that prevent people from participating in the issues that have an effect on their lives." Community Development incorporates both rural and urban development. However, It is important to discuss the 'Urban Community Development' (UCD) which has emerged as one of the strategies of intervention to resolve some of the problems of the city in general and of the miserable areas in particular.

UCD in India finds its basis from the rural community development programmes which commenced on 2nd October, 1952. The first pilot project under UCD commenced in Delhi, during the year 1958. Subsequently, it was followed by an another project in Ahmedabad in 1960 and the third in Baroda in 1965. The first and second were supported by the Ford Foundation while the third was launched with the help of the American Friends Committee. The basic features of an UCD programme are the people and their problems, the government and voluntary resources available to stimulate self-help, and urban community organizers to locate and develop native leaders and to translate

their problems in such a manner that can be satisfactorily interpreted by government and private agencies. Community development assumes the existence of people's initiative in one form or the other, which can be developed to modify the environment. Community participation is the fundamental principle of community development. It means involving the community at all stages of the project including necessary decision making right from the preplanning and planning stages throughout all phases of implementation, monitoring, evaluation and post-project sustenance.

## 2.2 Environmental Improvement of Urban Slums (EIUS)

The scheme received an impetus since 1974. From then on, it has been significantly treated as an integral component of Minimum Needs Programme and has been transferred to State sector. The per capita ceiling cost permissible below the IEUS scheme since 1972 is given below:

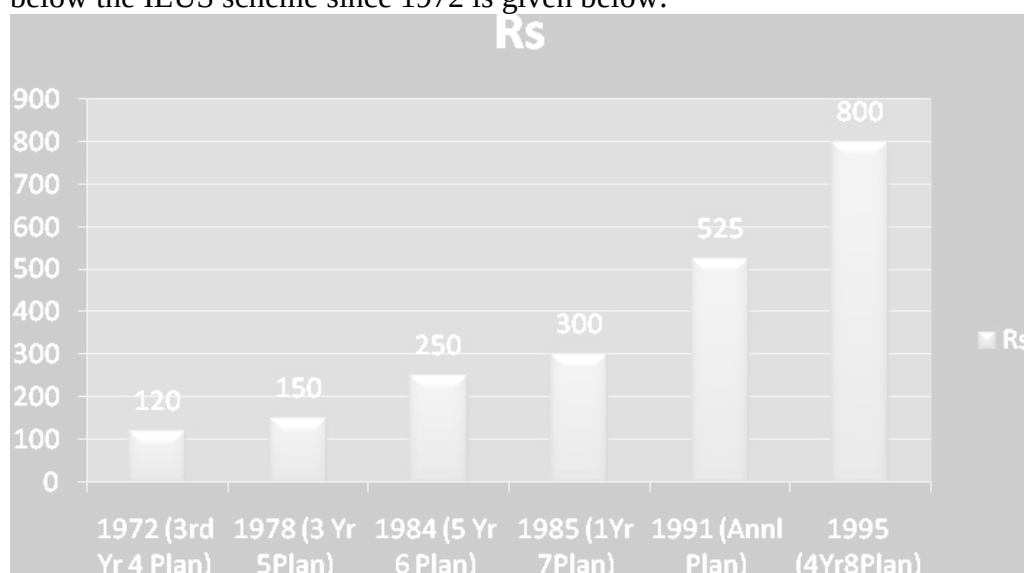


**Figure 1. Environmental Improvement of Urban Slums**

Components of water supply, drainage, community latrines and baths, widening and paving of lanes and street lighting are taken up under this scheme to improve the environmental conditions in slums. State Governments have not been able to provide adequate funds for this scheme and as such improvement and up gradation work in slums is not taken up widely under this scheme.

## 2.3. Urban Basic Services (UBS)

In 1981, the community development programmes were merged into a new service called Urban Basic Services (UBS). The principal aim of this programme is to improve and upgrade the quality of life of the most

vulnerable sections of the population - the women and children who tend to get neglected in the urban setting.

#### **2.4 Nehru Rozgar Yojana (NRY)**

As per the estimates prepared for the VII Five Year Plan, nearly 5 crore population (28 percent) in the urban area of the country was living below the poverty line during 1984-85. The proportion of Scheduled Castes and Scheduled Tribes population, amongst the population who are living below poverty line in urban area was also considerable. With a view to provide employment to the weaker sections in the urban areas and also to give incentive to the unemployed youths were provided money component to start self-employment by setting up micro enterprises in the urban areas, on the lines of 'Jawahar Rojgar Yojana' in rural areas.

#### **2.5 Urban Basic Services for the Poor (UBSP) – Empowerment and Convergence.**

The UBSP Programme was implemented as a Central Sponsored Scheme during the eighth five year plan with the specific objectives of effective achievement of the social sector goals; community organization, mobilization and empowerment and convergence through sustainable support system.

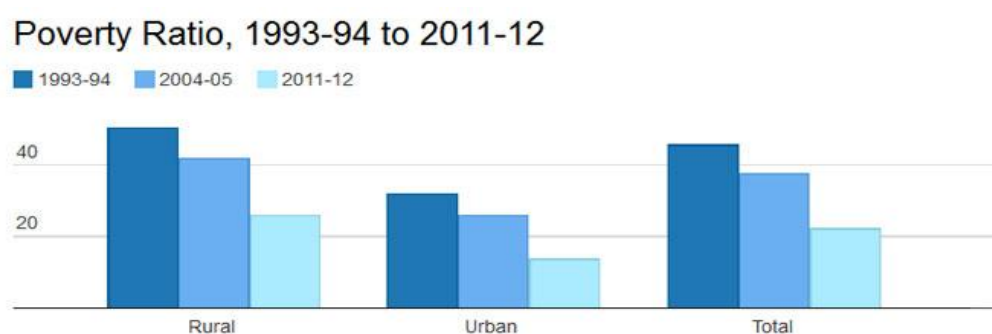
### **3.0. Statistical findings on India's Urbanization and Poverty Scenario**

India's urbanisation has been characterised by an unusually large number of highly-populated cities. In 2001, 27.9% of the urban population resided in 31 cities with a population of 1 million or more, compared with 9.5% of the urban population in 1911 (2 cities).<sup>3</sup> Once all major cities (> 100,000 population) have been accounted for, 62% of the urban population reside in 441 towns and cities – 8% of total urban areas. This results in a highly skewed composition of the urban population.

#### **3.1. Increase in urbanization and decline in poverty**

India has been witnessing rapid urbanization in recent decades. The urban population of India constitutes 285 million people and is expected to reach 534 million by 2026. Percentage decadal growth in urban areas was 31.2% vis-à-vis 17.9% in rural areas between 1991 and 2001. More than one-fourth of the urban population of India today lives in urban slums under appalling conditions with increased vulnerability to disease and ill health. Latest trends in urban poverty indicate that the number of urban poor is set to increase to a large extent in future in the absence of a well-planned, long-term intervention strategy.

“These higher expenditures, combined with a high population density around the poverty line, translate to a significantly lower poverty rate of 12.4 per cent for 2011-12,” the report said. The national poverty line using the Tendulkar methodology at the end of 2011-12 was estimated at Rs 816 per capita per month for rural area and Rs 1,000 per capita per month in urban areas for that year, according to the erstwhile Planning Commission, as India Spend reported earlier. That is Rs 27 per day in rural areas and Rs 33 per day in urban areas.



(Based on Tendulkar Method, Figures in %)

**Figure 2 Poverty Ratio, 1993-94 to 2011-12**

For example, for a family of five, the all-India poverty line in terms of consumption expenditure would be about Rs 4,080 per month in rural areas and Rs 5,000 per month in urban areas. Based on this estimate, there were 269.3 million people below the poverty line – 216.5 million in rural areas and 52.8 million in urban areas.

### 3.2. Decline in poverty ratio

The poverty ratio has declined from 39.6% in 2009-10 to 30.9% in 2011-12 in rural India and from 35.1% to 26.4% in urban India. The decline was thus a uniform 8.7 percentage points over the two years. The all-India poverty ratio fell from 38.2% to 29.5%. Totally, 91.6 million individuals were lifted out of poverty during this period.

### 3.3. Increase of slums

Between 2001 and 2011, the population census of India reported an increase in the slum population from 52.371 million people to 65.494 million people, an increase of 13.123 million. However, the slum population's share of urban

population decreased over this period from 18.3% to 17.4%. Measurement error is a major concern here as the number of towns reporting slums increased by 870. This is likely to have been driven by a reduction in the number of states and union territories not reporting slums. This may explain why other sources report a reduction in India's slum population. Marx, Stoker and Suri (2013) report a 10% reduction in the slum population between 1990 and 2007. While these periods are not comparable, it is important to note that using the same data between 1990 and 2001 we observe a 20% increase in the slum population, implying that between 2001 and 2007 there was a 25% reduction in the slum population to result in a slum population that was 10% below 1990 levels.

#### **4. Significance of Urban Development Programmes**

The process of urban development manifests the socio-cultural, economic-physical and political-administrative dimensions of the urbanization pattern in the society. Urban development policy in India is to be understood in terms of several policy statements of the government instead of relying on a single set of policy declaration

#### **4.0. Urban Scenario**

Urbanization and exclusive nature of economic growth has resulted in exclusion of communities who are socially and economically weak. As we know they are deprived of many facilities and working opportunities in urban areas. It is obvious that the deprivation indices of urban population have demonstrated that they are leading a pathetic life. However, given a chance to livelihood opportunities, they would be able to improve their position economically to begin with and socially later on". Some of the initiatives are briefly reviewed that relates to urban poverty alleviation. Urbanization has played a vital role in the economic progress of the developing as well as developed countries. Urban centres have become the engine of growth both push and pull factors of migration from rural areas to the big cities are reasons of people concentration for greater livelihoods and bigger life opportunities, which are absent in rural areas and scanty in small towns. As a result, rapid urbanization in the developing countries has been accompanied by excessive concentration of people in few big cities consequent challenges of housing infrastructure, slums, water supply sanitation, transport, environment and livelihoods for the urban poor, whereas small and medium towns have either become stagnant or declined. The work frame that builds up mega cities resides in the urban slums under deplorable conditions.

#### 4.1 Important Urban Development Programmes

The following are the salient features and chief merits of the urban poverty Alleviation programmes.

1) **U.C.D (Individual and Group Development):** Urban community development as one of the Strategies of intervention to solve some of the problems of city in general and depressed one. It is an area approach programme. This programme Centres a self help as well as develop leadership qualities which in turn helps to identify and present their problems to the governance. It helps to alter the environment urban citizen's effort and every functionary is considered as a significant agent in the complex process of individual and group development.

#### 2) Minimum Needs Programme

**EIUS:** Is an integral component of Minimum Needs Programme (MNP) which helps to improve the environment conditions in slums.

#### 3) Women & Children Development Programme

**Urban Basic Services (UBS):** It has been augmented in order to improve and upgrade the quality of life. Particularly the women and children who tend to get neglected in the urban setting.

#### 4) Self Employment for B.P.L in Urban Areas & Micro Enterprises (setting up)

**Nehru Rozgar Yojana (NRY):** This programme helps to provide employment to the weaker sections in urban areas.

#### Merits of the Programme

- to inculcate enterprise qualities of the individual.
- to provide housing and shelter up-gradation in turn leads to settlements in urban areas.
- to provide training for self employment
- to impart training relating to construction activities and
- to facilitate and accommodate people in urban wage employment which helps to change their occupation too.

#### 5. PMIUPEP: (Prime Minister's Integrated Urban Poverty Eradication programme)

This programme (PMIUPEP) was launched in the year 1995 to improve the quality of life of urban poor. It's main objective is essentially to help improve

the quality of life of urban poor. It is people oriented approach to alleviate urban poor in the cities. The chief characteristics, such as community empowerment, employment generation and environment improvement.

#### **6. NSDP :( National Slum Development Programme)**

The government of India, New Delhi has introduced the National Slum Development Programme under EIU as an additional Central assistance scheme to improve the situation of lack of improvement activities in urban slums with the main objective i.e. to upgrade urban slums in the year 1996.

#### **7. SJSRY: Swarna Jayanti Shahari Rozgar Yojana**

With a view to provide gainful employment to the urban unemployed and underemployed through encouraging the setting up of self-employment ventures or provision of wage employment, a new urban poverty alleviation programme, namely, Swarna Jayanti Shahari Rozgar Yojana (SJSRY) was launched by the Government of India, New Delhi, on 01.12.1997.

#### **4.2. Usefulness of Programmes**

Of all the above programmes reviewed, SJSRY is the most comprehensive and compact one which encompasses all the aspects of employment as well as income generation in urban areas. It has been able to create an impact and indelible imprint among urban poor households for the last one and a half decades in terms of formation of community structures, skill trainings, and enterprise development and in creation of wage employment etc. The revised guidelines of SJSRY have come into existence since 2009 which reinforced the influence of the programme in many towns and cities in the country and this scheme fitted as a fiddle in reducing the urban poverty.

#### **5. Review of Literature**

The literature on urbanization as a process and its spatial manifestation in terms of levels of urbanization has been extremely varied and intensive. Studies on the emerging trends of urbanization especially from environmental perspective are sectoral and widely distributed. In India, though urbanization is a recent phenomenon, is posing various problems as it is arising out of more tertiary or allied services than the secondary sector itself. The process of urbanization in India was labelled as “pseudo” as it was different from the urbanization occurred sequentially and gradually. In India the process of population concentration in cities was not backed by corresponding economic

progress. Here an attempt is made to review the available literature on the topic concerning urbanization and related environmental issues.

**Ramachandran (1992)** has a mixture of intention in his book on **“Urbanization and Urban System in India”**. Firstly, he wishes to write on Indian point of view in order to correct imbalances which arise from a western dominated literature. Ramachandran writing is full of Indian statistics and application of urban geographical principles to India’s history of urban development. Secondly, the author has something of a mission calling for studies which address current urban problems in India, including proliferation of slums, the inadequacy of city transport, inflated land values, deficiencies in infrastructure and the unequal spatial distribution of urban services.

**Amitabh Kundu (1994)** published an article on **“Pattern of Urbanization with special reference to Small and Medium Towns in India”**. According to him, urban growth across the size categories presents some interesting features. Till the nineties Class I cities in developed states grew at a faster rate as compared to small and medium towns. Whereas in the less developed states, small and medium towns grew at a similar or higher rate than that of Class I cities. This pattern changed in the nineties. Many of the less developed states like Assam, Bihar, Himachal Pradesh, Orissa and Rajasthan experienced high urban growth in their Class I cities as compared to smaller towns. Cities with million plus population registered a higher growth than the overall growth of all the Class I cities during 1981 -91 recorded 2.96 per cent growth while in 1991-2001 growth rate of 2.76 per cent was recorded. During the same period, million plus cities grew at the rate of 3.25 per cent and 2.88 per cent respectively.

**Dileep Kumar (1995)** in his dissertation **“Solid waste disposal with special reference to Thiruvananthapuram city”** attempted to find out the composition and sources of municipal solid waste in Thiruvananthapuram city. He concluded that the major sources of municipal solid wastes in the city were the big 40 and small legal and illegal markets, the slaughter houses, 20 government and 34 private hospitals, 1,000 hotels and 164,565 houses with 1,71,432 households. He estimated that the quantity of MSW generated from the corporation area come to 264.5 tons per day and on per capita basis it was 0.32 kg/day. He also recommended composting as the most suitable disposal option for solid waste since 70 per cent of the wastes generated in the city consisted of vegetable and putrescible matter.

### **Conclusion**

The government of India launched many policies to promote a balanced urban development in the country, create conducive environment for the development of required infrastructural services, and assist in efficient management of urban areas.

Urbanisation in India has been gradually increasing since independence; however, the rate of urbanisation has been far slower than other countries at similar stages of development. Most of the growth in urbanisation has occurred recently during the early 1990's and the subsequent high-growth periods. Rapid rise in urban population of India is leading to various problems like increasing slums, decrease in standard of living in urban areas thereby causing environmental damage as well. Urbanization also results in a disparity in the market, owing to the large demands of the growing population and the primary sector struggling to cope with them. It also poses a big challenge for the cities that are fastly growing due to migrant population shifting in Future research must highlight on the consequences of expansion of cities in shaping the spatial allocation of resources, people, and economic activity.

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## Capacity of Providing 'Present Food Production Security' Among Indian States

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### ABSTRACT

*The population of India is still increasing to some extent even after rate of decrease in population now a days. This trend of population growth mounts a pressure on limited natural and environmental resources. Also this increase in population compels us to ponder about decrease in per capita agriculture land holding, diminishing natural resources, adverse climate change and food securities and nutritional adequacy for a large segment of population. Keeping all these facts, the present research paper tries to coin out the evaluation of capacity building in terms of Present food Production security in 17 major states of India and also the analysis of relative status among these states for the same through the data provided by ministry of agriculture, government of India during 2013-14 on agriculture lands and also with the help of present food production security Index in India. Analysing all the states it can be concluded that Jharkhand, Orissa and Kerala are extremely insecure in terms of food production. Five states i.e. Tamil Nadu, Bihar, Assam West Bengal and Chhattisgarh are the moderate in term of food production. Karnataka, Maharashtra, and Andhra Pradesh are producing food very low in volume and the most food secure states are Rajasthan, Madhya Pradesh, Uttar Pradesh, Punjab and Haryana, Gujarat falls within the purview of moderate food production state.*

**Keywords:** Food grain, Net sown Area

### Introduction

The life of human depends on the capacity of long term balance with nature. Even the rate of increase in population is decreasing though the human population in absolute figure is increasing which is creating a pressure on the limited environmental and natural resources on this earth. The affect-on environment due to population pressure can be seen into three variables i.e.

population, per capita consumption and invention in technology. Population is related with total population, consumption is associated with the quantity consumed by per person and technology is associated with factors of input along with the waste or pollutants eliminated from per unit consumption. Thus, environment is always associated with human and its interrelationship with these three variables.

### **Population pressure on land**

The total geographical area of India is 2.4 percent of the geographical area of the world on which 17.5 percent of the world population inhabits. India is a country of villages because 68.84 percent of population comes from rural area which shows that still the two third of the population depends upon land or farming activity for their livelihood (farming includes crops, fishery, cattle's, horticulture and food processing.) Thus, Indian agriculture is not only important for food security for rural and urban population, but it is also important in creating opportunities in employment sector. This is why, the reforms in the structures of Indian agriculture is inevitable for the sustainable food security. In addition to all these aspects, after decreasing tendency in population growth, population is still increasing which mounts pressures on the limited natural and environmental resources due to which the quality of life is deteriorating day by day. Due to this population increase, we suffer from several severe problems like decreasing per capita farming land availability, deterioration in natural resources i.e. Land degradation, Soil erosion, Deforestation and climate change etc. For the present and future food security, the enough requirement of food stock (Buffer stock) is essential. The availability of food depends upon the food production and trade among the states. Due to insufficiency of data available for trade among the states the concept of food availability comes into existence.

### **Objective**

The objective of this study is to analyze the capacity of providing present food security by the states of India and shows the relative situation of the states in terms of providing present food production security.

### **Methodology**

In this study, three indicators have been taken i.e. per capita monthly food availability, Net sown Area and variability of net sown area of last 14 years. In this methodology, the method of computation of each index is simple and

measure the distance covered by a state as a proportion of total distance that exist between the best state and the worst state in respect of that indicator. Thus, we calculate the average value of indices to measure Index of present production security (FPS). The value lies between one and zero. Zero indicates the worst performance and one indicates the best performance. Now, by making a mixed Index on the basis of these acquired indicators, the states are being ranked. At last all these mixed Indices values (FPS) are being processed by 'Arc-view-GIS' software, using as a natural break, compared with 17 states of India, which is already analyzed terms of capacity of providing food production security. This method shows the demarcating capability of states in food production security. Then, all these are being represented by Maps.

### **Food grain production**

On the prevailing natural resources and market structure, every states produces the grains in accordance with these facilities. The production of food grain is distributed in more equitable manner as compared to dairy items and fisheries. Hence, it is clear that the availability of foodgrains provide platforms for food availability. Food grains include cereals and pulses. Every state must assure that people can buy their minimum necessity of food grains at affordable prices. States should not make an effort to produce enough food grains at any cost but they should produce the food grain according to their climatic and environmental conditions. It enhances the specialization due to small farm size and lack of access to market leads to productions of foodgrains to meet the requirement of farmers for their ownshakes. High foodgrains producers states are more food secures than less foodgrain producer states. Per capital availability of foodgrains in these states are the example of food security of its people. Therefore, it can be treated as a vital indicator.

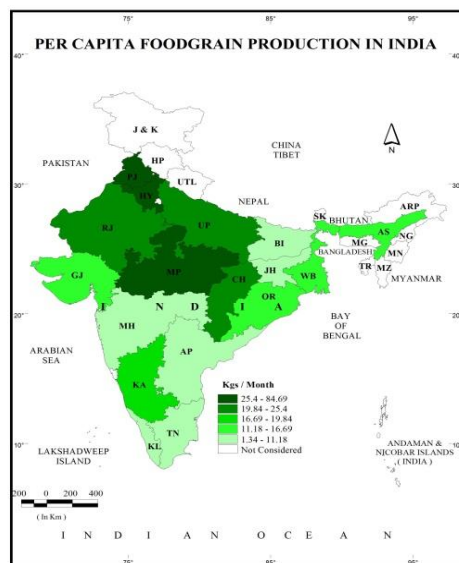
In India, during five years (2010-12 to 2014-15), the average availability of food grains to its fellow citizen is merely 17.59 Kg. per capita food grains is available in India. In analysis of states of India Punjab and Haryana are the leading states in production of food grains per capita 84.69 Kg. and 54.58 Kg. respectively. Remaining states are in such a way that Chhattisgarh (23.9 Kg.), Rajasthan (22.90 Kg.), Uttar Pradesh (19.84 Kg.), Karnataka (16.69 Kg.) and Orissa (15.64 Kg.). In contrast to it, the states which contributes least in per capita food grains production is Kerala (1.34 Kg./per month). Some of the states like Madhya Pradesh, Tamil Nadu, Jharkhand ranges between 9-10 Kg per capita per month production In addition to all these states some other

states like Bihar, Andhra Pradesh, Gujarat, Assam and West Bengal produce food grains per person per month ranges between 10 Kg. to 12 Kg. (Table-1.1, Map No. 1)

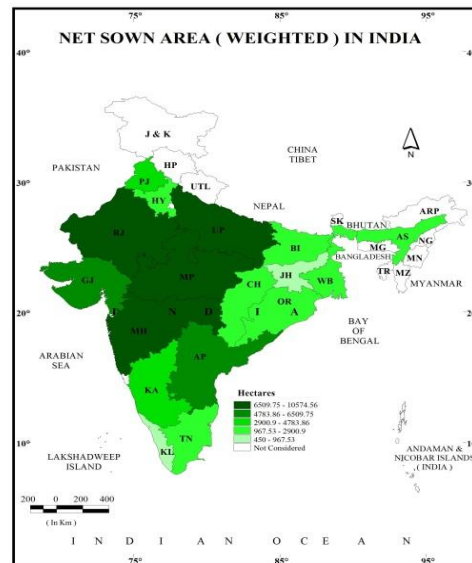
### **Net Sown Area**

Net sown area includes entire geographical area covered by crops production, orchard and horticulture. While calculating the Net sown area multiple cropping is being counted only one time in a year. Due to intense dependence on agriculture, more farming land is being used in agriculture. The possibility of high productivity in the Net sown area is limited due to the small farm size and monsoon based agricultural pattern. Still today many farmers are marginal and small and their life depends upon a small piece of plough. Even today, net sown area is vital for assuring food security and livelihood in our country. Government should try to transform the value of people engaged in primary sector (Agriculture and related activities) to other sector (Secondary and tertiary).

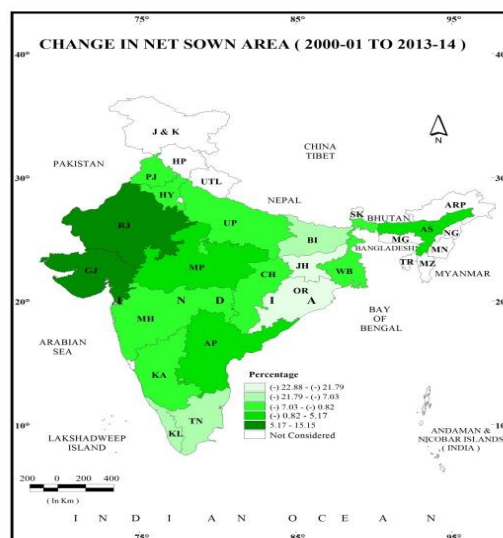
In India 43.02 percent of total geographical area falls within the purview of net sown area. Whereas in inter- state analysis, Net sown area is maximum in Punjab (82.31%), followed by Haryana (79.10%), Uttar Pradesh (68.68%) etc. Some of the states like Jharkhand, Orissa, Andhra Pradesh, and Chhattisgarh are the states in which net sown area out of total geographical area is least. In all remaining other states the net sown area out of total geographical area range in between 35 to 56 percent. Gross cropped area is maximum in Rajasthan and Uttar Pradesh. If we focus on the availability of per capita agricultural land the pressure on land to people ratio is very clearly recognized. For example per capita net sown area at national level is 0.117 hectare whereas in analysis of Indian states Rajasthan and Madhya Pradesh have 0.226 and 0.212 hectare respectively per capita net sown area is available which is maximum at national level. Some of the states like Jharkhand (0.042), Bihar (0.05), West Bengal (0.057) and Kerala (0.61 hectare) net sown area is available which are in list of least availability. In contrast to it, per capita gross crop production area is maximum in Rajasthan (0.38) and followed by Madhya Pradesh (0.35), Punjab (0.28) and least availability in Jharkhand and Bihar (Table 1.1). [Table enclosed end of the article]



Map No.- 1



Map No.- 2



Map No.- 3

In India only 48.15 percent area of the net sown area is irrigable and remaining 51.85 percent area depends upon the fate of monsoon. Net sown area of a state shows the level of food grain production. More net sown area depicts the more level of food grain production in that states although some

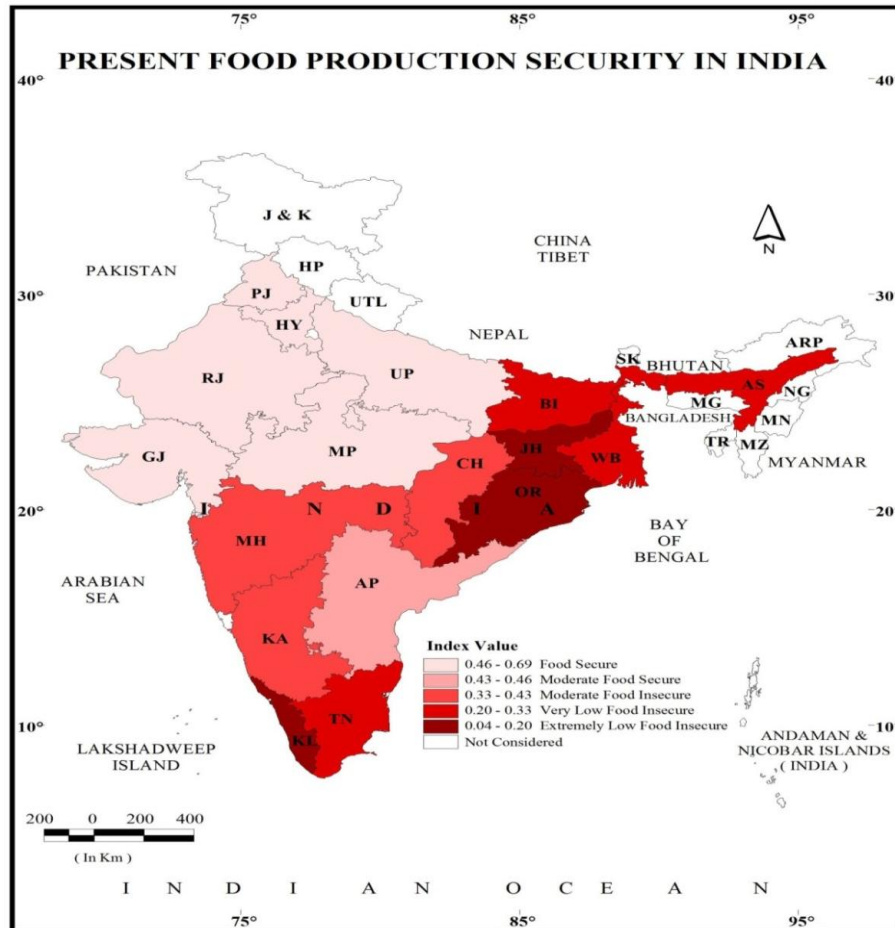
variability is occurred due to land fertility and availability of irrigational facilities. Generally productivity of irrigated agricultural farms is 70 percent more productive than that of un-irrigated area. Thus the yield of irrigated land is 70 percent more than that of un-irrigated area. Thus in calculation of MSSRF- Atlas of the sustainability of food security in India, weightage given to net irrigated sown area is 0.7 and weightage given to un-irrigated net sown area is 0.3. Weighted net sown area represents the quality of farming land on the basis of irrigated facilities and availability of land resources of the states. Weighted net sown area of any state shows that the state is not prone to availability of food grain. It is because the possibility of dairy and horticulture are the space left behind. Thus, the diversification and the multiple cropping is the further possibility in this measure of net sown area. This is why, net sown area is chosen as an indicator of expressing food security.

Weighted net sown area: In the analysis of all the Indian states, Uttar Pradesh rank first (10574.56 hectare) and Jharkhand ranks last ( 501.8 hectare) among all. In other words the order of WNSA is Uttar Pradesh > Rajasthan > Madhya Pradesh > Maharashtra > Andhra Pradesh > Gujarat > Karnataka etc. (Table 1.1, Map No. 2).

Change in the Net sown area:-In recent year the changes in the net sown area is the indicator of the use of land resources in increasing or decreasing order. It is because by 1980 all the agricultural lands are under the cover of plough. Now, the decrease in net sown area is either due to land degradation or due to use of agricultural land in industrialization and urbanization. In recent year survey the negative tendency in net won area of some states shows that these states are less efficient in providing food security as compare to those states which performs better in net sown area survey. This is why we can say that net sown area is the states can be a fare indicator of food security.

The survey conducted on net sown area by the ministry of agriculture, Government of India from 2000-01 to 2013-14 shows that during this period net sown area has been increased to 0.044 percent at national level whereas in the analysis of all the states of India during the same period shows that Rajasthan and Gujarat performs better with 15.14 percent and 9.21 percent respectively. Some of the states like Madhya Pradesh, Andhra Pradesh and Assam range in between 1 to 5 percent in increment. Apart from these five states, in all other states the growth in NSA has negatively been registered and the maximum negative growth has been registered from Orissa (22.88 percent ) and Jharkhand (21.75 percent ) whereas in remaining all other states it ranges between -1 to -10 ( Table 1.1, Map No. 3 ).

Present food production security Index:- At present, In India the three indicators which are being used to measure food security are as follow-  
Per capita monthly food grain production.



Map No. 4

Weighted net sown area.

What the variability observed in last 13-14 years.

The Index of food security is the average of the above three indicators. This index shows the relative situation of the states in terms of production. This is further processed by natural break of the software Arc view- GIS to categorize and compare into five typology (Table- 1.2, Map No. 4).

**Extremely food insecure states:** In this class, all those states which have class interval ranges from 0.04 to 0.20, are being categorized. Thus Kerala, Orissa and Jharkhand states falls within the purview of this class. Among these three Jharkhand performs worst because of least weighted net sown area along with 21 percent decrease in net sown area in last 13-14 years. Orissa is included in

this list due to the worst performance in net sown area (22.88 percent negative growth). In Kerala all the three variables performed dismal but the least availability of per capita monthly food grain production is vital.

**Moderate food Insecure State:** Those states which have class interval of 0.20 to 0.33 fall within this class. For example Tamil Nadu, Bihar, Assam, West Bengal and Chhattisgarh. In all these states net sown area is being observed as decreasing except Assam. Chhattisgarh and Assam is included in this list due to less availability of NSA whereas Bihar and Tamil Nadu is included in this list due to less availability of per capita monthly food grain production.

**Very low food Insecure states:** These states Karnataka, Maharashtra and Andhra Pradesh are included in this class. Maharashtra and Andhra Pradesh are being included due to the less availability of per capita monthly food grain production.

**Moderate food secure states:** Gujarat is the only state in this class which is neither food insecure nor food secure. This stands at average due to well-equipped facility of irrigation and falling in weighted NSA category.

**Food secure states:** Five states i.e. Rajasthan, Madhya Pradesh, Uttar Pradesh, Punjab and Haryana fall within this purview due to the well-off situation of food production. Due to the availability of irrigational facility and multiple cropping pattern, these states are food secure. Although in recent years a little bit of decreasing trend in NSA has been registered in Punjab, Haryana and Uttar Pradesh but Rajasthan still acquires rank first in increase in NSA at 15.14 percent.

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| <b>Table -1.1</b> |                                                                                          | Statistics Related to Agricultural Land ( 2013 - 14 )  |                                            |                                                    |                                                                |                                                     |                                                |                                           |                                   |                                          |
|-------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------|------------------------------------------|
| State             | Per Capita Monthly Five Year Average ( 2010-11 to 2014-15) Foodgrain Production ( in Kg) | Net Sown Area ( NSA ) Thousand Hectares ( in 2013-14 ) | Percentage of NSA to Total Geographic Area | Per Capita Net Sown Area Hect. / Person (2013-14 ) | Change in Net Sown Area from 2000-01 to 2013-14 ( In Percent ) | Percentage Net Irrigated Area to NSA ( in 2013-14 ) | Weighted Net Sown Area ( Hectares ) (2013-14 ) | Cropping Intensity ( Percent in 2013-14 ) | Gross Cropped Area ( in 2013-14 ) | Per Capita GCA Hect. / Person (2013-14 ) |
|                   | 1                                                                                        | 2                                                      | 3                                          | 4                                                  | 5                                                              | 6                                                   | 7                                              | 8                                         | 9                                 | 10                                       |
| All India         | 17.59                                                                                    | 141427.54                                              | 43.02                                      | 0.117                                              | 0.044                                                          | 48.15                                               | 69668.16                                       | 142.022                                   | 200858.51                         | 0.17                                     |
| AP andTelangana   | 10.52                                                                                    | 11409.06                                               | 29.26                                      | 0.135                                              | 2.646                                                          | 46.48                                               | 5543.93                                        | 126.049                                   | 14416.26                          | 0.17                                     |
| Assam             | 13.55                                                                                    | 2820.51                                                | 35.96                                      | 0.090                                              | 0.985                                                          | 10.76                                               | 967.53                                         | 145.399                                   | 4100.56                           | 0.13                                     |
| Bihar             | 10.46                                                                                    | 5252.25                                                | 55.78                                      | 0.050                                              | -7.253                                                         | 55.84                                               | 2748.89                                        | 144.321                                   | 7580.14                           | 0.07                                     |
| Chhattisgarh      | 23.90                                                                                    | 4685.72                                                | 34.66                                      | 0.183                                              | -1.622                                                         | 31.21                                               | 1990.60                                        | 121.597                                   | 5697.71                           | 0.22                                     |
| Gujarat           | 11.18                                                                                    | 10301.80                                               | 52.55                                      | 0.170                                              | 9.210                                                          | 41.09                                               | 4783.86                                        | 121.215                                   | 12487.38                          | 0.21                                     |
| Haryana           | 54.58                                                                                    | 3497.20                                                | 79.10                                      | 0.138                                              | -0.817                                                         | 83.81                                               | 2221.60                                        | 185.039                                   | 6471.19                           | 0.26                                     |

|                |       |          |       |       |         |       |          |              |          |      |
|----------------|-------|----------|-------|-------|---------|-------|----------|--------------|----------|------|
| Jharkhand      | 9.94  | 1383.59  | 17.36 | 0.042 | -21.787 | 15.67 | 501.80   | 120.837      | 1671.89  | 0.05 |
| Karnataka      | 16.69 | 9927.33  | 51.76 | 0.162 | -4.637  | 35.82 | 4400.48  | 123.616<br>7 | 12266.91 | 0.20 |
| Kerala         | 1.34  | 2050.99  | 52.78 | 0.061 | -7.027  | 19.37 | 774.17   | 127.58       | 2616.67  | 0.08 |
| Madhya Pradesh | 25.40 | 15422.06 | 50.03 | 0.212 | 5.170   | 61.31 | 8408.46  | 155.926      | 24047.03 | 0.33 |
| Maharashtra    | 9.51  | 17368.00 | 56.44 | 0.155 | -2.668  | 18.70 | 6509.75  | 134.317      | 23328.27 | 0.21 |
| Orissa         | 15.64 | 4495.07  | 28.87 | 0.107 | -22.884 | 27.74 | 1847.35  | 114.96       | 5167.66  | 0.12 |
| Punjab         | 84.69 | 4145.19  | 82.31 | 0.149 | -2.466  | 99.96 | 2900.90  | 189.319      | 7847.67  | 0.28 |
| Rajasthan      | 22.90 | 18267.70 | 53.38 | 0.266 | 15.145  | 41.88 | 8540.16  | 142.98       | 26119.53 | 0.38 |
| Tamil Nadu     | 9.64  | 4713.86  | 36.24 | 0.065 | -11.110 | 56.83 | 2485.80  | 125.109      | 5897.47  | 0.08 |
| Uttar Pradesh  | 19.84 | 16545.89 | 68.68 | 0.083 | -1.659  | 84.78 | 10574.56 | 156.509      | 25895.88 | 0.13 |
| West Bengal    | 14.72 | 5233.73  | 58.97 | 0.057 | -3.383  | 59.21 | 2809.65  | 183.778      | 9618.45  | 0.11 |

**Source:**

Col.1, Directorate of Economics & Statistics (GOI )

Ministry of Agriculture

Col.2, 5, 6, 8, 9, Land Use Statistics, Directorate of Economics & Statistics (GOI )

Ministry of Agriculture

Col. 3, 4, 10, Derived from , Land Use Statistics, Directorate of Economics & Statistics (GOI ) Ministry of Agriculture

Weighted Net Sown Area was Obtained by assigning 0.7 for irrigated and 0.3 for Un-irrigated area Sown

| <b>Table -1.2</b> | <b>Indicators and Indices of Present Food Production Security</b>                        |                                                                                                   |                                                |                                                                        |                                                                |                                                                                   |                              |      |
|-------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------|------|
| State             | Per Capita Monthly Five Year Average ( 2010-11 to 2014-15) Foodgrain Production ( in Kg) | Index of Per Capita Monthly Foodgrain Production (Actual Value - Min Value/ Max Value- Min Value) | Weighted Net Sown Area ( Hectares ) (2013-14 ) | Index of Weighted NSA (Actual Value - Min Value/ Max Value- Min Value) | Change in Net Sown Area from 2000-01 to 2013-14 ( In Percent ) | Index of Change in Net Sown Area (Actual Value - Min Value/ Max Value- Min Value) | Index of Production Security | Rank |
|                   | 1                                                                                        | 2                                                                                                 | 3                                              | 4                                                                      | 5                                                              | 6                                                                                 | 7                            | 8    |
| AP + Telangana    | 10.52                                                                                    | 0.110                                                                                             | 5543.93                                        | 0.501                                                                  | 2.646                                                          | 0.671                                                                             | 0.427                        | 7    |
| Assam             | 13.55                                                                                    | 0.147                                                                                             | 967.53                                         | 0.046                                                                  | 0.985                                                          | 0.628                                                                             | 0.273                        | 12   |
| Bihar             | 10.46                                                                                    | 0.109                                                                                             | 2748.89                                        | 0.223                                                                  | -7.253                                                         | 0.411                                                                             | 0.248                        | 13   |
| Chhattisgarh      | 23.90                                                                                    | 0.271                                                                                             | 1990.60                                        | 0.148                                                                  | -1.622                                                         | 0.559                                                                             | 0.326                        | 10   |
| Gujarat           | 11.18                                                                                    | 0.118                                                                                             | 4783.86                                        | 0.425                                                                  | 9.210                                                          | 0.844                                                                             | 0.462                        | 6    |
| Haryana           | 54.58                                                                                    | 0.639                                                                                             | 2221.60                                        | 0.171                                                                  | -0.817                                                         | 0.580                                                                             | 0.463                        | 5    |
| Jharkhand         | 9.94                                                                                     | 0.103                                                                                             | 501.80                                         | 0.000                                                                  | -21.787                                                        | 0.029                                                                             | 0.044                        | 17   |
| Karnataka         | 16.69                                                                                    | 0.184                                                                                             | 4400.48                                        | 0.387                                                                  | -4.637                                                         | 0.480                                                                             | 0.350                        | 9    |
| Kerala            | 1.34                                                                                     | 0.000                                                                                             | 774.17                                         | 0.027                                                                  | -7.027                                                         | 0.417                                                                             | 0.148                        | 15   |
| Madhya Pradesh    | 25.40                                                                                    | 0.289                                                                                             | 8408.46                                        | 0.785                                                                  | 5.170                                                          | 0.738                                                                             | 0.604                        | 2    |
| Maharashtra       | 9.51                                                                                     | 0.098                                                                                             | 6509.75                                        | 0.596                                                                  | -2.668                                                         | 0.532                                                                             | 0.409                        | 8    |
| Orissa            | 15.64                                                                                    | 0.172                                                                                             | 1847.35                                        | 0.134                                                                  | -22.884                                                        | 0.000                                                                             | 0.102                        | 16   |

|               |       |       |          |       |         |       |       |    |
|---------------|-------|-------|----------|-------|---------|-------|-------|----|
| Punjab        | 84.69 | 1.000 | 2900.90  | 0.238 | -2.466  | 0.537 | 0.592 | 4  |
| Rajasthan     | 22.90 | 0.259 | 8540.16  | 0.798 | 15.145  | 1.000 | 0.686 | 1  |
| Tamil Nadu    | 9.64  | 0.100 | 2485.80  | 0.197 | -11.110 | 0.310 | 0.202 | 14 |
| Uttar Pradesh | 19.84 | 0.222 | 10574.56 | 1.000 | -1.659  | 0.558 | 0.593 | 3  |
| West Bengal   | 14.72 | 0.161 | 2809.65  | 0.229 | -3.383  | 0.513 | 0.301 | 11 |

**Source:**

Col.1, Directorate of Economics & Statistics (GOI ) Ministry of Agriculture

Col.3, 5, Land Use Statistics, Directorate of Economics & Statistics (GOI ) Ministry of Agriculture

Weighted Net Sown Area was Obtained by assigning 0.7 for irrigated and 0.3 for Un-irrigated area Sown

| Mapping Index | Mapping Typology        | State              |
|---------------|-------------------------|--------------------|
| 0.46 - 0.69   | Food Secure             | RJ, MP, UP, PJ, HY |
| 0.43 - 0.46   | Moderate Food Secure    | GJ                 |
| 0.33 - 0.43   | Moderate Food Insecure  | KA, MH, AP         |
| 0.20 - 0.33   | Very Low Food Insecure  | TN, BI, AS, WB, CH |
| 0.04 - 0.20   | Extremely Food Insecure | JH, OR, KL         |

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