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## From Editor's Desk

Once, a former prime minister said that when the government spends 100 rupees, only 15 rupees reaches the actual beneficiary. In order to provide cheap grains to common people, cheap fertilisers and petroleum products such as diesel etc. to farmers, less expensive kerosene and LPG cylinder to the commoners, the government makes provisions for different kinds of subsidies in its budget. For the last few years, these subsidies have been increasing continually. In 2002-03, the Central government subsidy bill was Rs 43,533 crore which reached Rs 2,16,927 crore by the beginning of 2011-12. An important part of this subsidy, i.e., Rs 72,823 crore is for food items.

It is believed that the subsidy meant for poor people does not reach its correct destination and gets embezzled on its way itself. Not only this, the government has to spend a lot of money to make the subsidy reach its correct destination. According to an estimate by the Planning Commission, the government needs to spend nearly Rs 4 to make the subsidy of Re 1 reach the poor people through its Public Distribution System.

Apart from this, many economists are of the opinion that though it is important to provide cheap food and fuel to poor, and cheap fertilisers to farmers, the policy of subsidy is not good. We understand that when subsidy is given, the prices of subsidised items get reduced. Due to the reduction in the prices, people start using more of these items. Generally, subsidised items are scarce too. For instance, petroleum products. Our dependence on foreign companies for petroleum products is extremely high and is rising fast. Their prices have also been increasing and in this scenario, when subsidy is given on petro products like diesel, it would encourage misuse of these products, due to which not only government gets burdened with rising subsidy bill but our dependence on foreign countries would also increase.

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Today, a large chunk of food subsidy is spent on storage of food and the PDS. The pathetic condition of PDS in the country is no secret. Even after the heavy subsidy of more than Rs 72,000 crore, not all deserving people are able to get reasonable quantity of quality food grains and sugar through PDS. If each BPL consumer gets Rs 1,000 cash, he would be able to purchase these products from the market and if there are 40 crore BPL consumers in the country, then the total subsidy would be only Rs 40,000 crore and in the process people living below poverty line would benefit too.

A few years back, the thought of cash subsidy was an impractical one, however now the time has changed. In this era of information technology, direct cash transfer is not at all a difficult task. At many places, it is possible to send money directly to the labour's bank account under employment generation programme. At many places, widow and old age pensions are sent directly to beneficiaries' bank accounts. In this scenario, what we need is a strong political will.

This way, giving cash in lieu of subsidy may be a right step. UID Authority of India also submitted a report to the finance minister in this regard. The authority says that the UID number, which is given under the 'Aadhaar' may be used to transfer money through bank, ATM and even mobile banking. In case of fiddling under this system, beneficiary would be able to lodge a complaint directly to the government. In order to stop corruption and leakages in the conventional subsidy policy, the government has made an ambitious plan to transfer the money directly to the beneficiary account. The prime minister has constituted a committee for timely implementation of this policy for 25 per cent households in the country.

Heavy subsidy is still being given on diesel due to which its misuse in luxury cars is on the rise. Latest data published by Delhi government shows that in the year 2011-12, consumption of diesel in Delhi jumped by 15 per cent, while consumption of petrol decreased by 1.5 per cent. However, government has made no plan to replace diesel subsidy with cash transfer. On the other hand, heavy subsidy is given on chemical fertilisers by the government through fertiliser companies. Though discussions on giving direct subsidy to farmers has been going on for a long time, yet no concrete plans have been made to give subsidy directly to farmers. It seems the declaration of cash transfers is only a gimmick, devoid of sincerity to deal with inefficiencies across sectors.

The whole plan of giving cash subsidy is based on the Aadhaar Card. Aadhaar scheme was initiated a few years ago and UID Authority was formed for the same. The task of preparing Aadhaar card was given to companies. Any person residing in the country can get his card prepared and no proof for being the citizen of the country is required for the same. Many people from neighbouring Bangladesh have been residing in India after crossing the border. Due to poverty in Bangladesh, this tendency is on the increase. Therefore, the benefit of transfer of cash based on Aadhaar card may reach the foreigners too along with Indians. Thus, a large amount of taxpayers' money may not reach the deserving poor people of the country. It is important that the proof of citizenship is made mandatory for cash transfers.

It is unfortunate that the government is publicising proposed policy of cash transfers to poor, yet there is no generally acceptable definition of poor, and there is no mechanism to identify the poor. This way, the money targeted for the poor may not really reach them. The basic issue of identifying the poor is forgotten in the political game plan of transferring cash subsidy.

**Dr Ashwani Mahajan**  
*Chief Editor*

# Fiscal Performance Index of Indian States

Kanchan Singh

## Abstract

There is major concern in front of India to deteriorating fiscal discipline at the Centre as well as states. In this context, to maintain fiscal discipline at the state level many measures have been adopted. The states have initiated fiscal reforms to bring fiscal discipline at the state level. This study is an attempt to measure the fiscal performance of states by evaluating its performance over the time period 1990-91 to 2011-12 to see whether the fiscal performance of these states are improving or not after implementing the fiscal reform program. The paper has used a composite index known as Fiscal Performance Index (FPI). It is observed that the fiscal performance as a whole is improving after implementing the FRBM Act. Backward states are performance better than other states. There are more improvement in their rank and we have not seen to improve the status of special categories as compared to other states.

## Introduction

Fiscal imbalance means increasing difference between revenue and expenditure. It is a fact that, the Centre, several States are also facing deteriorating fiscal positions, with serious implications on their developmental efforts. Because of, insufficient revenue sources, uncontrolled growth of current expenditures, and failure of central transfers to grow as fast as the States' own revenues have been the sources of the imbalances. In many respects, the fiscal situation in the States is more critical than that at the Centre as the States have the primary Constitutional responsibility for providing basic social and economic services.

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The aggregate pictures of all the states have shown the vast inter-state differences in fiscal performance. The gravest sign of fiscal imbalance has been apparently the growing revenue deficit, a serious structural malady arising from faster growth of current expenditure than current revenue. For all states, the year 1987-88 saw the emergence of a deficit on revenue account (RBI, 1999). Also, for a full decade up to 1997-98, the states' revenue deficit as % of Gross Domestic Product (GDP) has risen but rather gently, i.e. from 3% to a little over 1%. But it was following the impact of the fifth pay payment commission recommendations that the states revenue deficit experienced a quantum leap. All the states have shown significantly improvement in their fiscal health in 2008-09 as compared to previous years. The improvement is the fiscal health of the states in low income states was much more than the higher income states in revenue deficit, fiscal deficit, as well as primary deficit. But in general, a higher central transfer to states by way of tax devolution and grants helped to significantly reduce and grants helped to significantly reduce revenue deficit in every states.

The key indicators of the Gross Fiscal Deficit (GFD) of the states government was 3.2 percentage of GDP in 1990-91 which increased to high level of 4.5 percentage in 1999-00 and then declined to 1.8 percentage in 2006-07 but then further increased to 2.9 percentage in 2009-10 which decreased in 2011-12 by 1.8 percentage. As a proportion of GDP, revenue deficit which was 0.9 percentage in 1990-91, which increased to high level of 2.7 percentage in 1999-00 and then turned to surplus in 2006-07 by -.06percentage but the situation has changed in 2009-10 with 0.5 percentage deficit in revenue account which shown surplus in 2011-12 by -0.3 percentage. Primary deficit of the state government was 1.7 percentage in 1990-91 which increased to the high level in 1999-00 with 2.2 percentage but in 2006-07 it shown surplus of -0.4 percentage which declined to deficit of 1.2 percentage in 2009-00 and it turned surplus in 2011-12 by -0.4 percentage (RBI, 2013).

Fiscal performance index for states of India has been developed to rank the states according to their fiscal performance. Fiscal position of state during the post reform is painful to observe that the fiscal crises, which started around 1985-86 among the states, aggravated further during the post-reform period. The RBI report for the year 2002 revealed that gross fiscal deficit as a proportion of Net State Domestic Product (NSDP) had increased in almost all states [RBI 2002]. The states' own revenue as a proportion of their aggregate expenditure had gone down

from 43.5 per cent to 41.5 per cent between 1990-91 and 2000-01. Interest payments showed a sharp rise from 13 per cent of revenue receipts to 21.6 per cent during the same period and increased further to 22.7 per cent in 2001-02. The debt-GDP ratio, which had declined during the 1990s till 1996-97, started rising again continuously. It was 19.4 per cent in 1991 but rose to 23.1 per cent during 2000-01. The primary deficit of the states, which had already worsened to reach 1.8 per cent of GDP in the bad fiscal year of 1990-91, increased further to 2.4 per cent by 1999- 2000. In other words, until 2001, almost all indicators suggested worsening of the fiscal situation in all major states [RBI 2002]. Although, the RBI report of 2004 on *State Finances* observes a reversal of this trend in the case of certain indicators, the improvement is only marginal and confined only to a few states. On the whole, the fiscal situation is still disconcerting in almost all the Indian states [RBI 2004].

In fact, there has been a serious concern among policy-makers about these crises during the post-reform years. This is evident from the fact that the Tenth Finance Commission first emphasized the need to bring about fiscal balance and then, for the first time in the 50-year history of finance commissions, an item of fiscal restructuring explicitly appeared in the Terms of Reference (TOR) of the Eleventh Finance Commission (EFC) [GoI 2000]. A single indicator based index, Fiscal Self Reliance and Improvement Index (FSRII) was designed by the EFC for this purpose and was given 7.5 per cent weight in the inter se distribution formula. But the EFC was also given the task to draw the 'monitorable' fiscal reform programme, through an additional term of reference. The idea behind this was to encourage the state governments to implement fiscal reforms. So the EFC also came up with a scheme called Fiscal Reform Facility (FRF). It is interesting to know how this FRF scheme, based on the use of only one indicator (revenue deficit (RD)/Revenue Receipt (RR)) was used and miserably failed to provide any incentive to the states to put their fiscal houses in order.

The FSRII constructed by the Twelfth Finance Commission (TFC) that considers the 'change' in a single indicator is narrowly based, unstable and biased against the better fiscal performers. Fiscal Performance Index (FPI), on the other hand, is multi-dimensional, more stable, just towards better performers and also useful for state level policy-making.

Dholakia and Solanki (2001) had developed a composite index of fiscal performance consisting of six different fiscal indicators and the states were ranked on the basis of the value of the index for different

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years. Similarly, Bhide and Panda (2002) had come up with another composite fiscal index, made up of five components, for judging the quality of central government budgets. Venkatraman(2003) did not construct a composite index but did rank the states according to their fiscal achievements by using six indicators. We have considered seven fiscal indicators, reflecting various aspects of fiscal performance.

### **Fiscal Performance Index (FPI)**

Fiscal performance index for states of India has been developed to rank the states according to their fiscal performance. It is based on seven indicators of fiscal balance. We have constructed the composite index. The individual indicator indexes have been calculated taking simple average of number of ratios under each head of index. The justification for using a multiple indicator model to evaluate the fiscal performance is because the selection of only one indicator for measuring fiscal discipline is unjustified.

The study is basically based on secondary data sources. The scope of the study limited to various fiscal indicators across the states during from 1990-2011. The data are collected from Handbook of Statistics of Indian Economy, Economic survey, State Finance of RBI, State Budget Documents, Indian Public Finance Statistic, State Finance Commission Reports and other sources. Simple statistical tools have been used to analyses the data collected for the study like percentages, average and range.

To measure the fiscal performance a composite fiscal performance index for Uttar Pradesh and other state have been developed known as Fiscal performance Index (FPI) following the approach of Archana Dholakia (2005).

FPI is consisting of three individual indices such as (A) Deficit Indicator Index (DII), (B) Own Revenue Effort Index (OREI) and (C) Expenditure and Debt Servicing Index (EDSI). Each indicator indices are consisting of ratios of fiscal indicators. (A) Deficit Indicator Index (DII) is consist of i) Gross Fiscal Deficit as a proportion of Total Expenditure (GFD/TEX), ii) Revenue Deficit as a proportion of Net Fiscal Deficit (RD/NFD) and iii) Capital Outlay as a proportion of Net Fiscal Deficit (CO/NFD). (B) Own Revenue Effort Index (OREI) is consist of i) Own Tax

Collection as Proportion of Revenue Expenditure (OT/REX) and ii) Own Non-Tax Collection as a Proportion of Revenue Expenditure (ONT/REX) and (C) Expenditure and Debt Servicing Index is consist of i) Non-Developmental Revenue Expenditure as a proportion of Revenue

Receipts(NDRE/RR),ii) InterestPayment as a proportion of Revenue Expenditure (IP/REX).

In the process for developing the composite index, following steps have been followed:

We have constructed the composite index by following the methodology developed by Morris and McAlpin in 1982 which is used to construct Physical Quality of Life Index (PQLI). In the construction process first of all above mentioned seven key fiscal ratios are calculated (See Table-1).

Secondly, each ratio has been calculated for each year i.e., for 1990-91 to 2011-12 and converted indices following the methodology of Morris and McAlpin(Table-1). The worst and best values of each indicator were identified. For each indicator the performance of the state in each year was put on a 0 to 100 scale where, 0 represents an absolutely defined worst performance and 100 represents an absolutely defined best performance and to aid the calculations, one unit point was added to the best values of the indicators. Thus the formula to calculate Index is as follows:

$$\text{Indicator Index} = \frac{(\text{Actual Value} - \text{Minimum Value}) D}{(\text{Maximum Value} - \text{Minimum Value})}$$

Since, the worst and best values are based on the 'actual' fiscal achievements of one or more states during the post-reform period; they are neither unrealistic nor over-ambitious. In other words, 0 and 100 represent the worst and best 'observed' values of an indicator respectively and not the 'hypothetical' values. We would like to clarify that we have given equal weights to all the three components while constructing the FPI and within each component too each indicator is assigned equal weight. In fact, one can use more sophisticated techniques for deriving weights like factor analysis or taxonomy.

In the third steps, the individual indicator indexes have been calculated taking simple average of number of ratios under each head of index. The justification for using a multiple indicator model to evaluate the fiscal performance is because the selection of only one indicator for measuring fiscal discipline is unjustified. For example Fiscal/Gross Domestic Product or Revenue deficit/revenue Receipts, this amounts to neglecting the other important fiscal variables. It also ignores the qualitative aspects of fiscal parameters like how the government spends, on what it spends, what is the proposition of debt, interest payments and their impact, how fiscal deficit is financed etc

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(Dholakia and Solanki, 2001). In addition to this it increases the probability of error measurement (Dholakia, 2005).

This is an easy method to find out the performance of the state, as an increase in the value of an indicator index would necessarily mean improvement in the fiscal performance and vice versa. Once the indicator index is formed, at last the composite index is calculated as a simple average of the indicator indices.

$$\text{Composite Index} = \frac{\sum \text{Individual Indicator Index of each year}}{\text{Number of Individual Indicators}}$$

The three indicator indices of Uttar Pradesh and other states for the years under study are presented in Tab. and the average of these indices are taken to construct the composite index presented in Table-13. According to the value of composite index the years are ranked as the year with highest index value is 1 and the year with lowest value is 20.

**Table 1: Critical Values and Formulas for Indices**

	BEST VALUE	WORST VALUE	FORMULAS
<b>GFD/TEX</b>	-1.075022044	50.79728485	50.80-AV/50.80+2.08
	-1.08-1=-2.08		
	Assam (2005)	Himachal Pradesh(1990)	
<b>RD/NFD</b>	-12029.75	138.5328028	138.5-AV/138.5+12030
	-12029.8-1=-12030.8		
	Orissa(2005)	Maharashtra(2005)	
<b>CO/NFD</b>	2595.15	-3458.930769	AV+3458.9/2596.2+3458.9
	2595.2+1=2596.2		
	Orissa(2005)	Orissa(2011)	
<b>OT/REX</b>	88.7951349	0.468555497	AV-.46/89.8-.46
	88.8+1=89.8		
	Karnataka(2010)	Gujarat (2005)	
<b>ONT/REX</b>	40.78689931	0.637913464	AV-.64/41.8-.63
	40.78+1=41.78		
	Haryana(1995)	Tamil Nadu(2010)	
<b>NDRE/RR</b>	2.978381473	69.64815514	69.6-AV/69.4-1.98
	2.98-1=1.98		
	Punjab(2000)	Maharashtra(1990)	
<b>IP/REX</b>	7.683640827	31.34241588	31.3-AV/31.3-6.68
	7.68-1=6.68		
	Tripura(1990)	West Bengal(2005)	

Source: State Finance, RBI (Various issues)

## Empirical Estimates of Fiscal Performance Index (FPI) for States

The three component indices prepared for various states for different years are presented in Table 2 and 3. The composite FPIs, formed by taking their simple averages, are presented in Table 4 and 5. As expected, the values of all the component indexes, for almost all the states, show a deterioration trend during the post-reform years. Second, the inter-state variation in respect of the entire component indexes although high, seem to be declining during the post reform period.

*Table 2: Component Indices for the Fiscal Performance Index (FPI)*

	1990			1995			2000		
	DII	OREI	EDSI	DII	OREI	EDSI	DII	OREI	EDSI
	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E
Andhra Pradesh	39.105	30.54	45.745	40.123	26.395	45.628	40.034	29.845	45.542
Assam	40.082	17.945	45.66	40.128	16.795	45.642	40.091	17.995	45.579
Bihar	40.037	18.695	45.582	40.125	18.645	45.47	40.006	17.245	45.462
Gujarat	39.966	30.4598	45.659	40.131	29.2548	45.659	40.242	30.2298	45.41
Haryana	40.131	34.645	45.684	40.131	27.245	45.586	40.288	43.69	45.611
Himachal Pradesh	39.79	15.915	45.676	40.072	15.945	45.625	40.263	18.57	45.425
Jammu & Kashmir	40.154	13.525	45.567	40.267	12.655	45.63	40.188	15.681	45.672
Karnataka	40.179	36.345	45.728	40.152	38.045	45.698	40.263	40.195	45.667
Kerala	40.057	30.715	45.631	40.105	36.02	45.556	40.23	33.53	45.378
Madhya Pradesh	40.12	25.48	45.742	40.138	26.26	45.681	40.236	29.145	45.589
Maharashtra	40.143	36.235	45.938	40.099	38.835	45.686	40.187	39.072	45.512
Manipur	40.204	9.7848	45.782	40.163	9.2498	45.753	40.255	9.3598	45.716
Nagaland	40.108	9.0948	45.697	40.071	8.2248	45.658	40.25	9.5548	45.475
Orissa	40.091	22.245	45.628	40.043	18.99	45.507	40.335	25.38	45.337
Punjab	39.93	32.595	45.597	40.098	30.495	45.278	40.247	31.675	45.348
Rajasthan	40.177	24.47	45.666	40.058	23.365	45.558	40.245	29.97	45.428
Tamil Nadu	40.122	34.68	45.785	40.191	39.765	45.699	40.277	43.43	45.619
Tripura	40.289	9.6098	45.803	40.292	10.045	45.75	40.292	13.185	45.616
Uttar Pradesh	40.043	23.57	45.622	40.082	22.57	45.668	40.262	27.22	45.476
West Bengal	40.023	27.795	45.654	40.037	30.95	45.504	40.219	23.645	45.123

Source: state finance: A study of budget, RBI (Various Issues), Handbook of statistics (RBI)

Second, the inter-component variations as can be seen from Table 2 and 3, are high for majority of the states, which justifies the inclusion of more than one component for constructing the fiscal discipline index. For instance, during 1990-91, for Orissa, the value of DI is as high as

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40.33, but value of OREI is as low as 25.3, which implies that, in terms of own collection effort the state is doing quite badly, but as far as the deficit index is concerned its performance is above average. The same is true for Rajasthan, Uttar Pradesh, MP and Bihar. In case of special categories states, Tripura 's DI value is 40.28 but the value of OREI is as low 9.60, which implies that, in terms of own collection effort the state is quite badly, but as the deficit index is concerned its performance is above average. The same is true for Nagaland, Manipur, Jammu & Kashmir, Assam and Himachal Pradesh. It is important to note that even the best performers for the entire period had achieved the FPI value of 98 compared to the ideal value of 100 (Table 12,13). As can be seen, the richer states like Maharashtra, Gujarat, Haryana, Karnataka, and Kerala etc. had a relatively high value of FPI during 1990 but by the year 2010, they had slid down considerably.

**Table 3: Component Indices for the Fiscal Performance Index (FPI)**

	2005			2010			2011		
	DII	OREI	EDSI	DII	OREI	EDSI	DII	OREI	EDSI
	VALUE	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E	VALU E
Andhra Pradesh	40.249	34.54	45.52	40.244	35.69	45.686	40.24	36.44	45.703
Assam	40.303	22.34	45.64	40.282	19.89	45.745	40.283	21.39	45.741
Bihar	40.259	17.04	45.447	40.27	19.89	45.692	40.27	20.54	45.723
Gujarat	40.242	27.23	45.41	40.24	38.64	45.579	40.263	44.04	45.582
Haryana	40.288	43.69	45.611	40.208	36.64	45.67	40.209	38.24	45.683
Himachal Pradesh	40.263	18.57	45.425	40.253	20.74	45.586	40.26	21.77	45.593
Jammu & Kashmir	40.188	15.68	45.672	40.263	16.42	45.58	40.235	17.46	45.67
Karnataka	40.263	40.19	45.667	40.261	51.39	45.801	40.249	42.69	45.802
Kerala	40.23	33.53	45.378	40.245	38.32	45.499	40.225	34.92	45.517
Madhya Pradesh	40.236	29.14	45.589	40.275	30.78	45.737	40.28	32.58	45.773
Maharashtra	40.187	39.07	45.512	40.254	42.23	45.629	40.252	41.99	45.639
Manipur	40.255	9.36	45.716	40.271	10.26	45.759	40.244	10.67	45.721
Nagaland	40.25	9.555	45.475	40.272	9.705	45.704	40.254	10.11	45.684
Orissa	40.335	25.38	45.337	40.291	26.04	45.738	40.292	26.38	45.796
Punjab	40.247	31.67	45.348	40.203	32.57	45.367	40.189	35.5	45.355
Rajasthan	40.245	29.97	45.428	40.273	30.12	45.595	40.277	30.64	45.649
Tamil Nadu	40.277	43.43	45.619	40.275	10.27	45.68	40.26	10.54	45.706
Tripura	40.292	13.18	45.616	40.291	14.13	45.69	40.291	15.91	45.73
Uttar Pradesh	40.262	27.22	45.476	40.265	26.19	45.598	40.271	28.19	45.629
West Bengal	40.219	23.64	45.123	40.224	23.36	45.345	40.238	23.99	45.378

Source: - state finance: A study of budget, RBI (Various Issues), Handbook of statistics (RBI)

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It is disconcerting to observe that during the entire post-reform. Period the FPI of all the major states continued to deterioration, (Table 12, 13). For instance, for Gujarat and Karnataka, the FPI deteriorated from 98 to 90. Low-income states like Bihar, UP and West Bengal already had poor FPI, around 73 to 83, which declined 76 to 86 by the year 2010. Its performance is below average in terms of all the three components, but the performance of the Deficit Index (DI) is the worst of all. The relative ranking of the states in terms of fiscal performance has also changed considerably due to the uneven rate of change in the FPI of different states.

**Table 4: Composite Fiscal Performance Index (FPI)**

	1990		1995		2000	
	FPI	Ranking	FPI	Ranking	FPI	Ranking
Andhra Pradesh	84.89	8	81.73	10	85.06	9
Assam	73.25	15	72.14	15	73.28	16
BIHAR	73.93	14	73.93	14	72.4	17
Gujarat	90.01	4	86.20	5	85.61	7
Haryana	88.9	5	82.57	9	99.18	1
Himachal Pradesh	70.93	16	71.22	16	73.97	15
Jammu & Kashmir	68.87	17	68.13	17	71.09	16
Karnataka	91.77	1	93.43	3	95.68	3
Kerala	85.98	7	91.31	4	88.89	5
Madhya Pradesh	80.85	10	81.62	11	84.58	10
Maharashtra	91.69	2	94.16	2	94.43	4
Manipur	65.25	18	64.66	19	64.85	20
Nagaland	64.44	20	63.52	20	64.96	19
Orissa	77.55	13	74.2	13	80.83	13
Punjab	87.72	6	85.69	7	87.04	6
Rajasthan	79.87	11	78.61	10	85.36	8
Tamil Nadu	90.06	3	95.19	1	98.91	2
Tripura	65.17	19	65.59	18	68.68	18
Uttar Pradesh	78.82	12	77.87	12	82.64	11
West Bengal	83.04	9	86.01	6	78.9	14

Source: - state finance: A study of budget, RBI (Various Issues), Handbook of statistics (RBI)

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*Table 5: Composite Fiscal Performance Index (FPI)*

	2005		2010		2011	
	FPI	Ranking	FPI	Ranking	FPI	Ranking
Andhra Pradesh	89.97	5	91.167	6	91.92	5
Assam	77.86	14	75.425	14	76.93	14
Bihar	72.45	16	75.396	15	76.06	15
Gujarat	88.61	7	94.078	3	99.5	1
Haryana	99.18	1	92.076	5	93.68	4
Himachal Pradesh	73.97	15	76.188	13	77.23	13
Jammu & Kashmir	71.09	17	71.881	16	72.91	16
Karnataka	95.68	3	98.92	1	98.21	2
Kerala	88.89	6	93.737	4	90.32	7
Madhya Pradesh	84.58	10	86.305	8	88.12	8
Maharashtra	94.43	4	97.693	2	97.46	3
Manipur	64.85	20	65.789	18	66.15	18
Nagaland	64.96	19	65.211	20	65.59	20
Orissa	80.83	12	81.581	10	81.94	11
Punjab	87.04	8	87.895	7	90.81	6
Rajasthan	85.36	9	85.591	9	86.13	9
Tamil Nadu	98.91	2	65.772	19	66.03	19
Tripura	68.68	18	69.651	17	71.45	17
Uttar Pradesh	82.64	11	81.659	11	83.68	10
West Bengal	78.9	13	78.699	12	79.36	12

Source: state finance: A study of budget, RBI (Various Issues), Handbook of statistics (RBI)

In case of Uttar Pradesh, the value of DI is as high as 40.04, but value of OREI is as low as 23.5, which implies that, in terms of own collection effort the state is doing quite badly, but as far as the deficit index is concerned its performance is above average in 1990. But in 2010, the value of DI is as high as 40.26 and the value of OREI is as low as 26.19, it shows that there is marginal improvement in OREI. The position of Uttar Pradesh was 12<sup>th</sup> in 1990 which improvement their position was 11<sup>th</sup> in 2000 and also in 11<sup>th</sup> rank in 2010 among the states.

Actually the position of Uttar Pradesh has improved but the value of fiscal performance index has also deteriorated during 1990 to 2011

### **Conclusion**

The present paper attempts to develop a multidimensional index for measuring the fiscal discipline of states. A composite index called the FPI was constructed by using seven different fiscal indicators. Given the level and length of fiscal crises, the need for such an index cannot be overemphasized. The successive finance commissions of India have not been in a position to provide adequate incentives to the states to become fiscally efficient. So in the empirical analysis for the comparison of backward and forward state in India shown the performance of fiscal discipline have wide variation. The backward state performed better than forward state.

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# Problems and Prospects of Carpet Industry in India after Liberalization

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## Abstract

This paper aims to examine the constraints and opportunities emerged for the Micro, small and medium enterprises in carpet industry after trade liberalization. The survey method was selected for this study. A structured questionnaire, containing both close and open ended questions was used for data collection. 65 carpet firms of Bhadohi District including villages like Ghosia, Khamaria, Gopiganj, Ghatampur, Raj Nagar, and Shivpur including Bhadohi city registered with All India Carpet Manufacture Association (AICMA) were surveyed. Liberalization has brought many opportunities for micro, small and medium enterprises apart from challenges as emerged from the findings of the study. Findings of the present study show that liberalization gave access to new markets, increase demand of products and decrease in overall cost of order. Increased cost of raw material, difficulty in 'export facilitation' and 'legal regulatory framework, procuring funds from local financial institutions were identified as the major constraints for the carpet industry in Bhadohi District of India.

**Keywords:** Carpet Industry; Trade Liberalization, Small & Medium Enterprises; India; Bhadohi

## Introduction

Egypt is regarded as the original home of carpet making from there it spread to other parts of the East. Memphis, Thebes, Babylon, and Nineveh were the four chief centers of production. The manufacture of carpets was later taken up at Alexandria, and from Alexandria it was

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imported into Western India, (DAS et al 1992). Although the Mughal king Akbar is credited with the introduction of pile carpets into India, Jehangir and Shahjehan are hailed as Mughal emperor who brought the art of Indian carpets to its prominence (Juyal 1993; Saraf 1986;Waziri 1986). Many of the carpets produced during the reign of Shahjehan are housed in the Victoria and Albert museum in London and in other museum across the Europe, including few in the Jaipur museum in India (Saraf 1986).

In the post-British period such indigenous industries started flourishing in different parts of the country. Each region engaged in making different types of carpets with variations in material (silk, wool, etc.), designs, colour and quality. On the basis of quality of wool used in the production, the feel of carpets differs. Northern region carpets are soft and shiny - while those of southern region are rough and opaque. The Indian hand-made carpet industry is a significant contributor to the country's rural economy, which is an export-oriented industry and helps in providing employment. The strength of the industry is the small and medium sized exporters with tremendous export potential and the highly talented crafts persons who have been weaving intricate designs of exclusive floor coverings, (Bowonder et al, 2005). The carpet industry in India is spread over some specific belts. The traditional carpet manufacturing regions are located in Bhadohi, Mirzapur, and Agra in the state of Uttar Pradesh, Jaipur in the state of Rajasthan and in the Kashmir valley.

Iran, China, India and Nepal are the key players in the global carpet trade. Other significant exporters include Turkey, Afghanistan, and Pakistan. Europe and America are the chief importers. Indian Carpets are famous the world over. With its magnificent designs and the heart winning workmanship it has been able to capture the export market and to make mark in the global carpet market. India has made remarkable progress in export market of hand knotted carpets. The Indian hand-made carpet industry is a significant contributor to the country's rural economy, which is an export-oriented industry and helps in providing employment. The strength of the industry is the small and medium sized exporters with tremendous export potential and the highly talented crafts persons who have been weaving intricate designs of exclusive floor coverings, (Bowonder et al, 2005).

The hand-knotted carpet industry is one of India's leading export industries. Floor coverings are the country's third largest earner of foreign exchange, and hand-knotted carpets make up a large share of the market [International Labour Rights Fund 1996:3]. Carpets are

produced on a large scale in three regions in the country: Rajasthan, Jammu and Kashmir, and in and around the districts of Mirzapur and Bhadohi in Uttar Pradesh. The Mirzapur-Bhadohi region accounts for about 85 per cent of Indian carpet exports ('Child Labour in the Carpet Industry of India', *The Hindu*, July 16, 1996, p 9). This region is often known as the 'carpet-belt' since the carpet industry is the main industry. It is difficult to completely assess the number of people employed in this sector as this sector has backward linkages and support industries.

The production of hand knotted carpets is very labour intensive and time consuming. The demand for hand knotted carpets in the international market has declined due to changes in consumer tastes in favour of cheaper, less durable and modern design carpets, rather than more costly, longer lasting and traditional design carpets, (Venkateswarlu et al, 2006).

### **Literature Review**

Tendulkar and Bhavani (1997) argue that notwithstanding their lack of competitive strength, small-scale industrial units in India could survive due to product and geographical market segmentation and policy protection. Cook and Nixon (2000), argue that even with sound management and strong product demand, the lack of credit constrains MSMEs capacity to respond to the market and expand production. Gray (2000) observed that MSMEs employment potential has attracted favourable responses from both sides of the political spectrum to the prospect of small business being the panacea to the woes of ailing economies. Yoguel and Boscherini, (2000). Suggested that since SMEs are equally operating within a globalize economy, where there is an intensive competition, then they must develop competence require for enhancing products and processes development, implementing organisational changes and developing new links through the market. According to Mugler (2000), MSMEs development is influenced by the stance that government takes with respect to encouraging people to start and develop their own business and through the behaviour of the politicians and government officials in their dealing with entrepreneurs. Smallbone and Welter (2001) suggested that the potential role of SMEs in transformation includes: generating employment and thereby contributing to absorbing labour surpluses which result from economic restructuring; contributing to the development of a diversified economic structure; contributing to the development of a supply base to serve the needs of large firms; and being a source of innovation. They clarified that the development of

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SME sector can also contribute to the wider process of social transformation that is integral part of the transformation from a socialist to a democratic, market based system. They emphasised that while setting up and developing business results from the creativity, drive and commitment of individual rather than as a result of government action, the conditions that enable or constrain the process if affected by the wider social, economic, political and institutional context over which government has major influence. They analysed the variety of ways in which government can affect the nature and pace of SME development. One of the ways in which state can influence SME development in any economy is through its influence on the macroeconomic environment in which business is conducted.

Perhaps the most obvious way in which state can influence SME development is through direct support policies and programme that are designed to assist small firms to overcome size related disadvantage. Another way in which state can influence SME development is through its influence on the development of those economic institutions that are necessary part of a market economy such as the business support infrastructure, banks and other financial intermediaries. Bhavani (2002), argues for improving the competitive strength and commercial viability of small-scale units in the changing context, substantial improvements will be needed in technology, such as mechanisation, organisation and information and the revamping of policy measures to encourage the growth of small units through collective efforts, ending their isolated mode of operation. He asserts that Protection (provided by an external agency like the government) can never be a viable alternative to the inherent competitive strength of any economic organisation as it is neither possible nor feasible in the long run. Protection is a transitory measure and can be used only to give time to industrial units to improve their competitive strength. All industrial units, small or large, have to sustain them-selves on their own competitive strength by successfully facing competition in market economies.

Even to provide employment (an argument that has been widely articulated in favour of protection to the small-scale industries) in a sustainable way and at higher wages, industrial units have to be competitive and commercially viable. Chadha, (2003), observed that with lack of technical skills, there is little incentive for rural firms to invest in technology, leading to low levels of labour productivity in the rural manufacturing sector compared to urban manufacturing. Udechukwu (2003) asserts that the development of SMEs is an essential

element in the growth strategy of most economies and holds particular significance for developing countries. The best performing economies in Asia are heavily based on SMEs which are major sources of dynamism in economic development.

The requirements for SMEs to access the global market and upgrade their position within the international market as a result of trade liberalization are becoming increasingly difficult due to competition. Subramanya (2004), Observed that because of globalisation and domestic economic reforms on small industry, Small industry has suffered in terms of growth of units, employment, output and exports. But the policy changes have also thrown open new opportunities and markets for the sector. He asserts that the focus must be turned to technology development and strengthening of financial infrastructure in order to make Indian small industry internationally competitive and contribute to national income and employment. Harvie (2004) argued that with the increased economic integration there has been increased recognition by regional governments of the potential for a substantial increase in the participation by small businesses in the generation of regional income, employment, exports, investment and expanded economic growth. He reviewed the contribution of the SME sector to the growth and development of the regional (East Asian) economies, and their increasing importance in the attainment of a sustained recovery of the region in terms of economic growth, employment, trade and investment and the development of globally competitive economies. He also identified: barriers to their development; key factors essential for their capacity building; strategies to enhance their competitiveness in the global marketplace; and key components relating to their export success.

Building capacity, improving governance, reducing transaction costs, promoting further market liberalisation, addressing non-tariff barriers, increasing internet access, and facilitating trade and investment are all directly relevant to improving the capacity of small businesses to exploit export market opportunities and for their regional growth. He asserted that accurate and timely information on, for example, market opportunities, financial assistance, access to technology is crucial for SMEs to compete and grow in a global market environment. Mathew (2004) Observed that the vibrancy and dynamical of the sector anticipated under an era of deregulation and de-reservation remaining largely unrealized. The study stated that the country needs a strong small and medium enterprises policy, which was closely linked to its international commitments. Tagoe et al (2005) summarised that the

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main financial challenge facing SMEs is access to affordable credit over a reasonable period. This is determined by the financing needs of SMEs and the action of investors. Tambunan (2005) observed that in the era of world trade liberalization and economic globalization, great demands are made on the ability of SMEs to improve their efficiency and productivity and to adapt to and be flexible as regards market, product, technology, management, and organization. As the era generates larger market opportunities, individual SMEs are often unable to capture these opportunities. Morris and Basant (2005) argue that a better understanding of the process of evolution of the modern small scale sector in the late industrialising economies can help India make appropriate policy choices. They suggested that in the age of liberalisation and globalisation, any attempt at creation of a competitive small scale sector in the country would need to explicitly take note of the emerging global production and knowledge networks. They explain that in the age of liberalization, the small firms can no more remain isolated from the global technological and structural changes. Their key argument is that changes in technology and global industrial structure provide growth opportunities for Indian SMEs and policy initiatives will need to explicitly recognize these emerging opportunities and use appropriate instruments to facilitate the utilization of these opportunities by Indian firms. Mathew (2004) Observed that the vibrancy and dynamical of the sector anticipated under an era of deregulation and de-reservation remaining largely unrealized.

The study stated that the country needs a strong small and medium enterprises policy, which was closely linked to its international commitments. Tagoe et al (2005) summarised that the main financial challenge facing SMEs is access to affordable credit over a reasonable period. This is determined by the financing needs of SMEs and the action of investors. Tambunan (2005) observed that in the era of world trade liberalization and economic globalization, great demands are made on the ability of SMEs to improve their efficiency and productivity and to adapt to and be flexible as regards market, product, technology, management, and organization. As the era generates larger market opportunities, individual SMEs are often unable to capture these opportunities. Morris and Basant (2005) argue that a better understanding of the process of evolution of the modern small scale sector in the late industrialising economies can help India make appropriate policy choices. They suggested that in the age of liberalisation and globalisation, any attempt at creation of a competitive small scale sector in the country would need to explicitly take note of

the emerging global production and knowledge networks. They explain that in the age of liberalization, the small firms can no more remain isolated from the global technological and structural changes. Their key argument is that changes in technology and global industrial structure provide growth opportunities for Indian SMEs and policy initiatives will need to explicitly recognize these emerging opportunities and use appropriate instruments to facilitate the utilization of these opportunities by Indian firms. Terungwa (2012), found that SMEs appear risky, they are therefore not attractive to investors. The biggest risk facing SMEs today are financial and strategic risks. For financial risks, cash flow is especially a concern; businesses ought to consider the source of their money in order to keep the lights on to pay employees, operate and grow. Strategic risk on the other hand includes competition and economic conditions. Fohtung et al (2012) highlighted that with the failure of the public sector in providing needed employment and economic opportunities, SMEs are considered a reliable alternative to state-led economic development approaches.

Furthermore, a key factor explaining these developments is the increasing concerns in recent years about countries growth performances and high levels of structural unemployment. SMEs thus have significant attributes which make them able to survive different economic changes. Their entrepreneurship flexibility and responsiveness to change are an essential driving force of economic development. SMEs are often more labour intensive than larger firms and therefore have lower capital costs associated with the creation of jobs. The employment opportunities they create improve the livelihood of millions of poor people and indirectly contribute to the attainment of higher economic growth and hence, poverty reduction. Onteru And Jyotsna (2013) observed that economic reforms based upon the principle of liberalization, Privatization and Globalization (LPG) and the changes at the international economic scene including the emergence of World Trade Organization (WTO), have brought certain challenges and several new opportunities before the MSME Sector. The most important challenge faced by the sector is that of growing competition both globally and domestically. At the same time this sector has also been facing some problems which are related to Credit, Infrastructure, Technology, Marketing, and delayed payment hassles on account of so many rules and regulations etc.

Tyagi (2011) analysed the carpet industry scenario vis-a-vis international markets. The Indian carpet industry during the post-

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independence era has witnessed an export-led growth. The prospect of carpet industry is very much dependent on the exports. Export prospects of carpets basically depend on overseas demand and domestic supply potential. Indian carpet has a special place particularly in the heart of the people in the developed countries which absorb 88-90% of Indian carpet exports. USA and Germany, the two largest and established markets for carpets together account for 76% of India's exports. Devendra Prasad Pandey (2011) analysed the impact of recession on carpet industry. Decrease in the export orders of carpets has pushed carpet weavers and business community including sub-contractors, owners of dyeing plants, washing units to close down their businesses. It is advisable that carpet industry can think of diversification, more innovative products, cost-effective product line and technological advancements in the interest of weavers.

### **Research Problem**

The World Bank's approach is that trade liberalization increases competition and consequently, efficiency and productivity (World Bank, 2002). While according to United Nations Conference on Trade and Development, "Trade Liberalization makes it significantly difficult for small and medium enterprises to survive or maintain their business position in the local and, if applicable, in the global market," (UNCTAD, 2004). Debates on the role and impact of trade liberalization in India have been contentious. The benefits and costs of trade liberalization for developing countries constitute an increasingly controversial issue (Khor 2001). Economic reforms based upon the principle of liberalization, Privatization and Globalization (LPG) and the changes at the international economic scene including the emergence of World Trade Organization (WTO), have brought certain challenges and several new opportunities before the MSME Sector. The most important challenge faced by the sector is that of growing competition both globally and domestically (Onteru And Jyotsna 2013).

Carpet Industry in India has experienced a major change in recent years. The industry is moving towards the emergence of new market and old existing market is saturated. Chinese industry is emerging as the biggest threat to Indian carpet industry, in terms of pricing and volumes, APITCO, (July, 2009). The prospect of carpet industry is very much dependent on the exports. Decrease in the export orders of carpets has pushed carpet weavers and business community including sub-contractors, owners of dyeing plants, washing units to close down their businesses (Devendra Prasad Pandey 2011).

The critical issue at this juncture is the viability of the trade liberalization policy in fostering the competitiveness in Micro, Small and Medium enterprises in general and carpet industry in particular. In this background the present study becomes significant.

### **Research Questions**

This study aims to seek the answer of the following broad questions through gathering information from both primary and secondary sources.

1. What are the constraints and opportunities emerged for the Micro, small and medium enterprises in Carpet industry after trade liberalization?
2. What intervention measures are required to address the problems faced by this sector due to trade liberalization?

### **Objectives of the Study**

The specific objectives of the study are:

1. To analyze the trend of exports in various categories of carpets in the major markets
2. To identify the constraints and opportunities emerged from trade liberalization for carpet Industry.
3. To identify the entrepreneurial strategies adopted by the exporters in response to the constraints of trade liberalization.

### **Methods of Research**

The survey method was selected for this study. In this study all the carpet firms of Bhadohi District registered with All India Carpet Manufacture Association (AICMA) were included in the sampling frame. 65 Enterprises were surveyed from the high concentrated areas of Bhadohi district including villages like Ghosia, Khamaria, Gopiganj, Ghatampur, Raj Nagar, and Shivpur including Bhadohi city. Area wise simple random sampling technique was used to collect data. Primary data was collected with the help of structured questionnaire of multiple choices. The exploratory cum descriptive research design method is used in the present study. The tools used in the analysis of data collected include various statistical tools which include descriptive statistics using Microsoft Excel and IBM SPSS Version 16.

### **Analysis and Findings**

Exporters of carpet industry in Bhadohi District were chosen as the respondents for the study. Two Hundred and Nine exporters, who were registered with All India Carpet Manufacturers Association as on May 12, 2012, were selected as sample frame from carpet Industry. Data

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and opinions from exporters were collected through the distribution of structured questionnaires. Out of 209 exporters, a total of 65 (25.9%) responses were received. Of the 65 respondents, 24 (36.9%) were Proprietor/Owner, 22(33.8%) were Partner and 14 (21.5%) were Managers. Remaining % respondents were Directors (3), Merchandiser (1) and Export Executive (1).The detail of the types of respondents are shown in Table 1.

*Table 1: Respondent Category*

<i>Respondent Category</i>	<i>Frequency</i>	<i>Percent</i>
Proprietor/Owner	24	36.9
Partner	22	33.8
Manager	14	21.5
Merchandiser	1	1.5
Export Executive	1	1.5
MD/Director	3	4.6
<b>Total</b>	<b>65</b>	<b>100.0</b>

Out of total 65 carpet organizations that completed the questionnaire, 24 (36.9%) were established before liberalization (1990-91) and remaining 41 (63.1%) were established after liberalization (1990-91) (Table 2). Most of the carpet organizations (70.8) that we investigated were in urban areas of Bhadohi city and remaining 19 (29.2%) were in rural areas of the villages like Ghosia, Khamaria, Gopiganj, Ghatampur, Raj Nagar, Madhosingh and Shivpur of Bhadohi District. (Table3).

*Table 2: Period*

<i>Year</i>	<i>Frequency</i>	<i>Percent</i>
Before 1990-91 Liberalisation	24	36.9
After 1991 Liberalisation	41	63.1
<b>Total</b>	<b>65</b>	<b>100.0</b>

*Table 3: Area –wise distribution of Carpet Organizations*

<i>Variable</i>	<i>Frequency</i>	<i>Percent</i>
Urban	46	70.8
Rural	19	29.2
<b>Total</b>	<b>65</b>	<b>100.0</b>

As depicted in Table 4, 55 (84.6%) carpet organizations were Manufacturer Exporters, 4 (6.2%) were Merchant exporters and remaining 6(9.2%) were involved in both types of business. According to Venkateswarlu et al, (2006), Carpet exporters can be divided into two groups: merchant exporters and manufacturing exporters.

**Table 4: Type of Business**

<i>Variable</i>	<i>Frequency</i>	<i>Percent</i>
Manufacturer Exporter	55	84.6
Merchant Exporter	4	6.2
Both	6	9.2
<b>Total</b>	<b>65</b>	<b>100.0</b>

Based on the criteria of investment given in the Micro, Small and Medium Enterprises (MSME) Act 2006, we have tried to find out the categories of Carpet organizations. As per the MSME Act 2006, a manufacturing organization that invest up to 25 Lakhs comes under Micro enterprise, a manufacturing organization that invest between 25 Lakhs to 5 crore comes under small enterprise and a manufacturing organization that invest between 5 to 10 crore comes under Medium enterprise. It may be observed from table 5 that majority of Carpet organizations (52.3%) were small enterprises, followed by micro enterprises (12.3%) and medium enterprises (4.6%). Out of 65 respondents who completed the questionnaire, 20 (30.8%) had not provided investment detail of their organizations.

**Table 5: Distribution of Carpet Organizations by Investment**

<i>Investment in Rs</i>	<i>Frequency</i>	<i>Percent</i>
Up to 25 Lakh (Micro)	8	12.3
25 Lakh to 5 Crore (Small)	34	52.3
5 to 10 Crore (Medium)	3	4.6
Not replied	20	30.8
<b>Total</b>	<b>65</b>	<b>100</b>

### ***Specific Region-wise export of Carpet Items***

It may be observed from the Table 6 that most of the carpet organizations export their products to USA and Canada (64.6%), followed by Europe (56.9%) and Gulf countries (12.3%). Other regions where carpet organizations export their products include South East Asia (12.3%), East Asia & China (9.2%), South Africa (6.2%) and Australia (12.3%).

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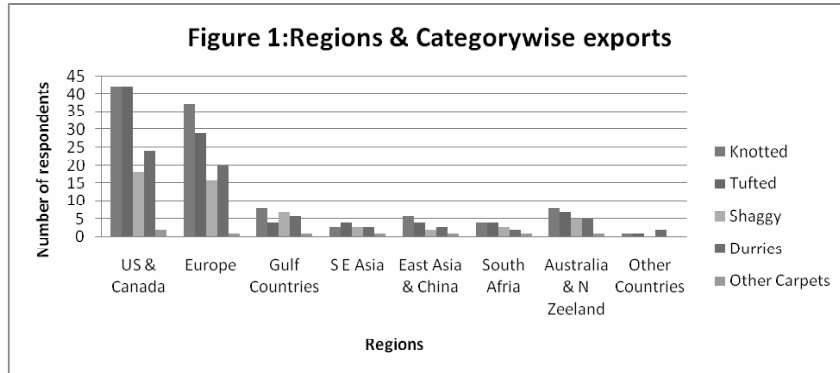
**Table 6: Region-wise export of Carpet Items**

<b>Regions</b>	<b>Number of Respondents</b>	<b>%</b>
USA & Canada	42	64.6
Europe	37	56.9
Gulf Countries	8	12.3
South East Asia	3	4.6
East Asia & China	6	9.2
South Africa	4	6.2
Australia	8	12.3
Other countries	1	1.5
<b>Total</b>	<b>109</b>	

(Note: The total numbers of responses are greater than the total number of respondents because respondents chose more than one region where their products have been exported).

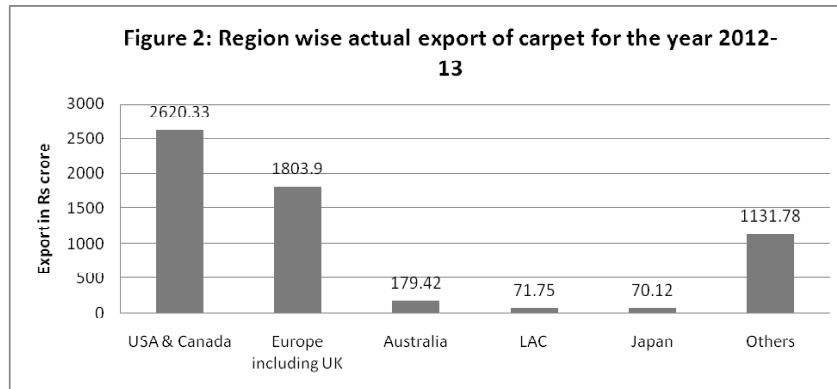
### **Region and Category-wise Exports of Carpet Items**

As shown in Figure 1, Majority of carpet items, Knotted (64.62%) and tufted carpets (64.62%) of Bhadohi is found to be exported to United States, followed by Europe (56.9%) and (44.6%) respectively. Carpet items such as Shaggy (27.7 %) and Durries (36.9%) are also mostly exported to United States, followed by Europe (24.6 %) and (30.8%) respectively.



Other types of carpets which are also exported to USA & Canada and Europe include Jute Carpets, Jacquard and flat wear carpets. And other prominent regions where export is significant are Australia & New Zealand (12.3% of Knotted carpets, 6.2% of Tufted carpets, 10.8 % of Shaggy, 9.2% of Durries and 1.5% of Other carpets ) and Gulf countries with percentage share of 12.3% of Knotted carpets, 10.8% of

Tufted carpets, 7.7 % of Shaggy, 7.7% of Durries and 1.5% of Other carpets. Other countries comprises of Scandinavian countries whose share is very low. Actual value of exports also shows the same pattern as indicated in Figure 2.



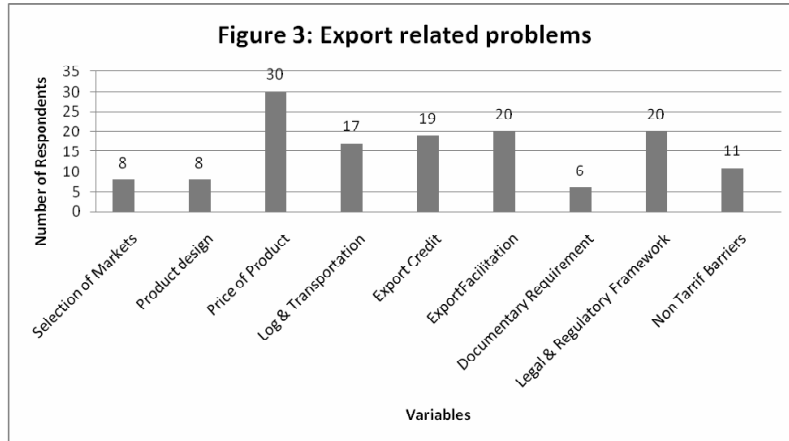
Source: Export-Import Data Bank, Department of Commerce, MOC (GOI).

***General Constraints Faced by the Carpet Exporters***

Economic Reforms based upon the principle of liberalization, Privatization and Globalization (LPG) and the changes at the international economic scene including the emergence of World Trade Organization (WTO), have brought certain challenges and several new opportunities before the MSME Sector. The most cited challenge, as emerged from the review of literature, is: growing competition both globally and domestically. At the same time this sector has also been facing some problems which are related to Credit, Infrastructure, Technology, Marketing, and delayed payment hassles on account of so many rules and regulations etc. To know whether Carpet industry in India facing similar or other problems, respondents were asked to indicate the challenges they are facing. It may be seen from the figure 3 that getting right price for their product is the major problem faced by 46% carpet organizations. This is because of the fierce competition from China who is selling machine made carpets at lower prices in international markets. Prices of carpet export are not increasing in the same proportion as the cost of imported raw wool and labor charges have increased. Though Government of India has tried to make export hassle free but exporters are still facing difficulty in ‘export facilitation’ and ‘legal regulatory framework’ as pointed out by 30.77% of respondents. Export credit was also not found within the reach of 28% of carpet exporters. 26% exporters indicated that they are facing difficulty in Logistics & Transportation. A few respondents also pointed

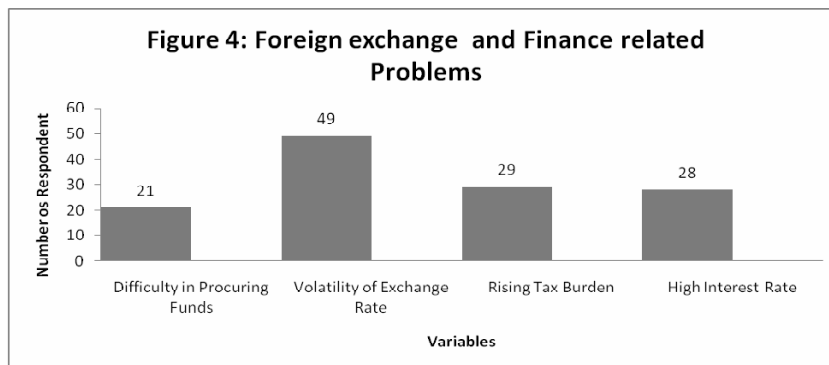
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out during personal interaction that in spite of one Inland Container Terminal at Madhosingh, they face difficulty in Logistics & Transportation as frequency is very low and the schedule of trains is also not suitable to the exporters.



### ***Problems Related to Finance and Foreign Exchange***

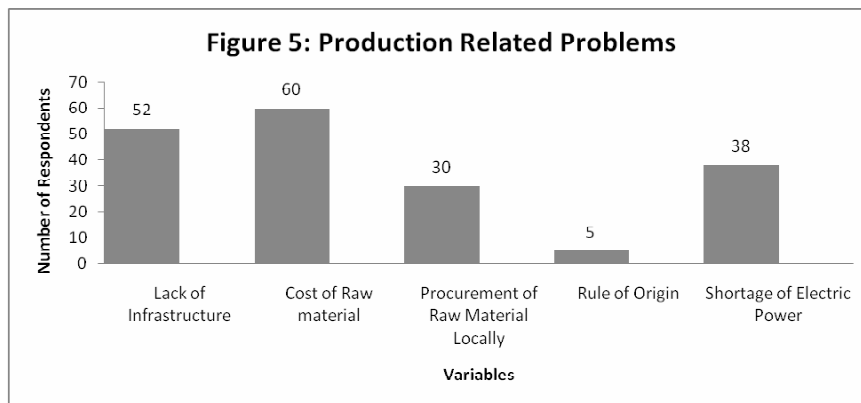
We have also investigated foreign exchange and financial problems of the exporters and found Volatility of Exchange rate hit the exporters two ways. Firstly, imported wool (Raw Material) becomes costlier. Secondly, carpet industry being a buyer market on depreciation of local currency, customers ask for lower prices or renegotiate the term when the order is confirmed. Tax burden of the carpet exporters has increased as the income tax has been imposed on the income of exports incidentally after liberalization. Interest rates are also a concern as high interest rates increases the cost of the order. 30.77% exporters also indicated that they face problem in procuring funds from local financial institutions as shown in Figure 4.



***Problems Related to Production***

As shown in Figure 5, majority of respondents (92%) indicated that increased Cost of raw material is a major constraint. This issue is also highlighted in a study by Tyagi (2011). According to him, at present carpet industry is passing through its tough time, especially the hand knotted carpet sector. Nothing is going in its way, on the one side, carpet industry is still reviving from the recession blow and on the other side industry is facing a huge depreciation in skilled weavers in order to complete the export order in time. Cost of the production has increased, but buyers want the carpet at old prices. Lack of infrastructure and lack of the availability of raw material in the local market are other constraints related to production, as indicated by 76.9% and 46.1% the respondents respectively.

Some of the respondents also pointed out during personal interaction that Good quality and sufficient quantity of raw material (Wool) is not available in India; Wool Fibre Industry (Sheep Rearing) should be promoted; Good breed sheep can be reared to produce high quality of wool to contain high prices of wool in international markets. It can minimize import of wool from Australia and New Zealand. In this way we can save foreign exchange and can ensure high quality of wool.



(Note: Overall percentage of responses is greater than 100 per cent because respondents chose more than one option).

***Opportunities Emerged for Carpet Industry from Liberalization***

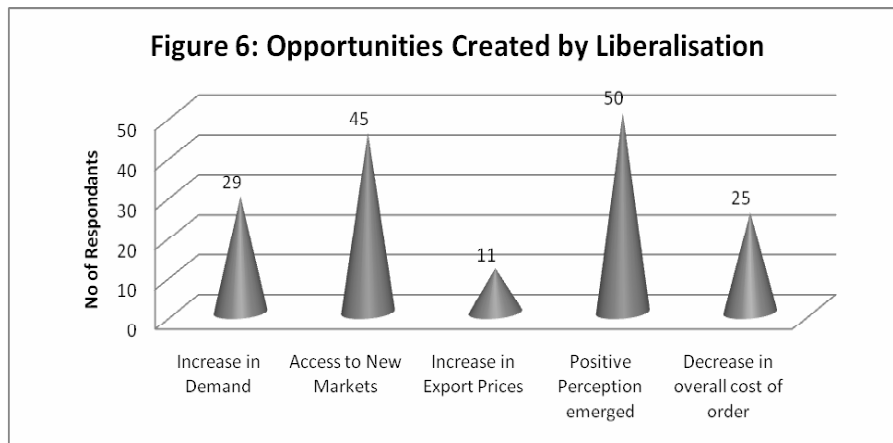
Liberalization has brought many opportunities for micro, small and medium enterprises apart from challenges. We tried to find out what

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are the specific benefits or opportunities as emerged from the liberalization to carpet exporters. As shown in Figure 6, 65% respondents indicated that it is the positive perception which has emerged towards India from the Liberalization, 61.5% said liberalization gave access to new markets, followed by increase in demand (34%) and decrease in overall cost of order (46.15%). Some respondents (20%) have also indicated that the liberalization given them an opportunity to get higher prices on their export items. This finding corroborate the findings of an earlier study conducted by Jena (2008), where he found that export of Indian Handicrafts has reached at a commendable height after liberalization.

The growing opportunity for handicrafts in global market is observed when the Indian handicrafts export (including the carpets and other floor coverings) crossed Rs 1,220/ crores in 1990-91 from merely 10 crores in the mid fifties. Again it increased to Rs. 7157.64 crores in 1998-99 and Rs 9270.50 Crores in 2000-01. It had reached at the peak of Rs. 17276.71 Crores in 2005-06.



(Note: Overall percentage of responses is greater than 100 per cent because respondents chose more than one option).

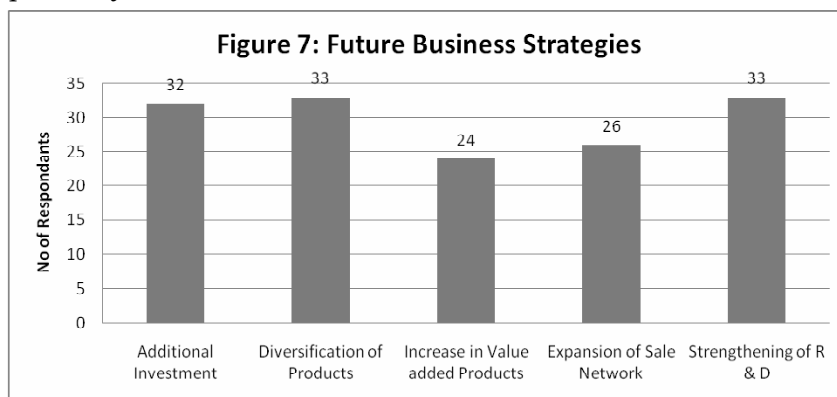
### ***Future Business Plan of Carpet Exporters***

In response to a question regarding the future business plan, 80% respondents indicated that they were in the mode of expansion of their business, while the strategic intention of 18.5% respondents was to maintain status quo of their business for the time being and remaining 1.5% wanted to reduce their business size (Table 7).

*Table 7: Directions of exporters' future business plan*

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Expansion	52	80.0
Status Quo	12	18.5
Downsizing	1	1.5
<b>Total</b>	<b>65</b>	<b>100.0</b>

Further, respondents were asked to indicate different business strategies adopted by their organizations. Respondents who were in favor of expansion of their business plan in future choose different business strategies as shown in Figure 7. 51% respondents were in favour of strengthening R & D and diversification of products each, followed by additional investment, Expansion of sale network and increase in value added products by 49%, 40% and 37% respondents respectively.



(Note: Overall percentage of responses is greater than 100 per cent because respondents chose more than one option).

### **Conclusion**

Though the US and Europe continues to be the biggest market for Indian carpet exports but new markets such as Turkey and Gulf countries are also emerging. Category wise knotted and tufted carpet dominate the export from Bhadohi to the world market but export of Shaggy carpet in the low end is also getting momentum from this region.

The positive perception which has emerged towards India after Liberalization has given an opportunity to the carpet exporters to explore the new markets while retaining old ones. Liberalization has given access to new markets thereby increasing the demand for Indian

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carpets. Cost of imported raw wool and labor charges have increased but the prices are not increasing in the same proportion. Mechanisation of carpet industry will save carpet industry from fierce competition from China which is selling machine made carpets at lower prices in international markets.

Government should make export hassle free, Export credit should be easily available. Interest rates are also a concern as high interest rates increases the cost of the order. Tax burden of the carpet exporters has also increased as the income tax has been imposed on the carpet exporters. Government should remove Income Tax from carpet exports as it will make carpet export competitive. Skilled weavers are deficient in this industry. Government should train weavers. RBI should intervene to stabilize the local currency as Volatility of Exchange rate hit the exporters severely. Carpet Exporters face difficulty in Logistics & Transportation as Inland Container Terminal at Madhosingh, Bhadohi is virtually defunct. Wool Fibre Industry (Sheep Rearing) should be promoted; Good breed sheep should be reared to produce high quality of wool to contain high prices of wool in international markets. It will save foreign exchange and also will ensure high quality of wool. Carpet exporters should expand their business, strengthen the R & D and diversify the products. Expansion of sales network to meet the demand of international market is also required on the part of carpet exporters.

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# Land Reforms in Modern Bihar

Tej Pratap Azad

Agriculture has been the symbol of civilised society even from the ancient time. The importance of agriculture has developed much for the people of Bihar due to division of Jharkhand state from Bihar on 15 Nov. 2000. Agriculture has been supposed to be the finest occupation for the people of Bihar because it supplies the most of our needs. In spite of all, the agriculture of Bihar is not in prosperous condition. The defective land settlement is considered as the main causes of the backwardness of agriculture. Land reform is considered the main step in order to get release from these problems. The defective land settlement had been stated or marked as a severe obstacle in the way of agriculture development even at the time of freedom movement of the country. Land reform is an institutional remedy of agriculture development.

According to Gunnar Myrdal—"Land reform is a planned and institutional reorganisation of the relation between man and land." G. Parthasarthy has also emphasised on land reforms. He stated that "Land reform in comprehensive sense includes " changes in agrarian structure including credit, marketing etc."<sup>1</sup>

Various technical and institutional steps have been raised to change in agrarian economy. Technological reforms includes use of improved seeds, fertilisers, improved ploughs, tractors, harvestors, irrigation etc. which help to raise productivity even if no land reforms are introduced. The institutional reforms includes the re-distribution of land ownership in favour of the cultivating classes so as to provide them a sense of participation in rural life, improving the size of farms, providing security of tenure regulation of rents etc. The socialists believe that existence of feudal or semi-feudal relations was the real causes of backwardness and poverty in rural communities.

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Probably Bihar was the state where land reforms legislations were first brought in. It is important also to know the rural class composition right before the land reforms. In 1950's, Just before the Zamindari Abolition. There were 2,05,927 regularly revenue paying, permanently settled holdings. They accounted for 90 per cent of the land area legally, the Zamindars were considered to be the owners of the land. But in reality their role was that government appointed middlemen who collected revenue from the title holders. Revenues used to be paid in cash to the government and it used to be 90 per cent of the revenue paid by the title holders to the Zamindars. But the Zamindars had the right to collect any amount of revenue as they wished from the title holders.

At the time of independence, there were three types of land tenure systems prevailing in the country. The Zamindari systems, the Mahalwari System, and Ryotwari system. The basic difference in these systems was regarding the mode of payment of land revenue. In the Zamindari system the land revenue was collected from the farmers by the Zamindars in Mahalwari system by the village headman on behalf of the whole village while in ryotwari system the land revenue was paid to the state directly by the farmers. In all the three systems the actual practice adopted was to get the land cultivated by tenants.<sup>2</sup>

### **Objectives of Land Reforms**

As stated above the Zamindari system was based on exploitation. It created a parasitic class of Zamindars which did not do any work on land but snatched away what ever surplus over the minimum subsistence the cultivators produced. Under the Ryotwari and Mahalwari system also the practice of cultivation tenants became widely prevalent. These tenants were also exploited in a number of ways. Particularly miserable was the condition of tenants at will and sub-tenants.

It was basically to stop the exploitation of the actual tillers of the soil and pass on the ownership of land to them that land reforms were introduced in the post independence period in India. The government defined the objectives of land reforms as follows :-

(i) To remove such impediments to increase in agricultural production as a result of the agrarian structure inherited from the past, and. (ii) To eliminate all forms of exploitation and social injustice within the agrarian system to provide security for the tiller of soil and assure equality of status and opportunity to all sections of the rural population.

## **Programmes for Land Reforms in Bihar**

The following programmes have been adopted to land reforms in Bihar.

### **(i) Zamindari Abolition**

First of all, the Bihar government passed the Zamindari Abolition Act in 1947. Then in 1948, this was amended and published as Bihar Zamindari Abolition Act 1948. In 1950, Bihar Land Reforms Act was passed which was approved by the supreme court. During this period, the Zamindars opposed this act with full force. By this act the rights of Zamindars and title holders on land were legally terminated. And these rights were directly vested with the state government. But the process of implementation of this act was extremely slow. In spite of the government orders, Zamindars had not submitted documents of their private estates. Just before the making of Zamindari abolition legislation, there were 2,05,927 estates. But later the land reforms implementation committee informed that 4,74,000 middlemen were affected by this act. According to one assessment the Zamindars were successful in keeping 14 per cent or about 15 lakh acres of their own land in the name of "Khas" land. In Bihar, Zamindari system has been completely Abolished in 1952.

### **(ii) Ceiling**

Despite of the implementation of the Zamindari abolition Act, most of the erstwhile Zamindars still retained a large part of their land. A good section of the occupancy and non occupancy ryots became big Jotedars. With the declared aim of breaking this centralisation of land, for the first time in 1955, the ceiling bill which is called Bihar Agricultural land (Ceiling and Management) Bill was prepared. Due to the strong resistance, Bihar Land reforms (ceiling, land allocation and surplus land acquisition) Act was brought in. In this act any person (not the family) was given the right to keep 20 to 30 acres of land depending upon the category of the land. A part from this, the right was given to retain 10 acres of land as homestead area 15 acres of growing folder in areas specially delimited, the additional land equivalent to one fifth of ceiling limits per dependent with the total not exceeding twice the ceiling limit in case the number of dependents exceeding four.

The biggest concession available to the land owners under this act was that within one year of implementation of this act, the land which they owned in their capacity as ryots could be transferred in name of

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such persons who are entitled to inherit that land or could become owners of a part of the land after the death of the land owner.

There were amendments to this act in 1971 and 1973 according to which instead of one person the family (one head and three minor children) was considered as the units and the ceiling limit was reduced from 95 to 45 acres.

As far as the implementation of these acts are concerned, landowners retaining ceiling surplus land on 19th April 1962 were served notices in 1970 and there too only to 125 land owners in the first phase. By 15 March 1981 the government had acquired only 3.69 lakh acres of surplus land and even in that only 2.49 lakh acres were re-distributed. It is a strange irony that till 02 Oct. 1996, the distributed government land is 9,64,239 acres i.e. 3.59 times more than the distributed surplus land. Even the distributed Bhoodan land is much more than this, though most of it is infertile. 23 per cent of the land assessed as surplus by the government was left to the owners on the various grounds. Land owners again took resort to filing cases and about one lakh acres are under litigation.

### ***(iii) Tenancy Reforms***

As the third stage in land reforms, the question of tenancy came to the fore. The congress Agrarian Reforms committee which was known as Kumarappa committee, had suggested that those real tillers who are not themselves the owners of land but who had been cultivating the land hired by the title over a period of more than six years, would get the ownership rights over such land. A clear condition for taking back the land for self cultivation was that it should be cultivated with their own labour.

The most common form of the title holding in Bihar is tenancy. Normally poor and small middle peasants are engaged in tenancy. In some parts, prosperous peasants also hire land and till it. Specially in irrigated areas division of the harvest is the main form of tenancy. Contrary to the tenancy laws, a tenant never gets more than 50 per cent, of the net produce. They are not legally protected because all tenancy is oral. There is no written record.

No government has expressed the political will to solve this problem, Karpoori Thakur, during his tenure as chief minister had taken up the plan for updating of the land records and keeping tenancy records, so as to protect the rights of the tenants. But after this plan went ahead for some time in Koshi division, this was stopped saying that "this will become like a survey and tenants would record their names in large

numbers leading to disruption of peace in the agricultural Area". Even during the JD. regime twice there was some talk of providing rights to tenants. Tenants could not get their rights but on the other hand they were evicted in large numbers. Their problems remain the same even today.

**(iv) Land consolidation**

Land consolidation Act was enforced in Bihar in 1956. Like tenancy form, the work of consolidation of holdings was given up after some time. Absence of upto date records of land itself blocked its progress. Wherever there were efforts to keep it going, large landowners using the muscle and money power took over the fertile land of peasants into their possession and left their infertile lands to them. Seeing an attack on their interests the peasants started opposing land consolidation and finally this process came to a halt. It is said, that land consolidation was a major cause, for the development of agriculture in Punjab. But in Bihar this has been the reason for peasant's problems.

**Table: Number of operational land holding and area operated by size classes in Bihar (1971-1991)**

Category	Size of holding (Hectares)	No. of holding		% holding	
		1970-71	1990-91	1970-71	1990-91
Marginal	0 - 1.0	4874	8976	64.3	76.65
Small	1.0 - 2.0	1109	1327	14.6	11.33
Semi-Medium	2.0 - 4.0	915	951	12.1	8.12
Medium	4.0 - 10.0	54	404	7.2	3.45
Large	10 and above	153	53	1.8	0.45
	Total	7087	11711	100.00	100.00

**Table: Area of operational holding in Bihar**

	Size of holding	Total Area		In Percentage	
		1970-71	1990-91	1970-71	1990-91
Marginal	0 - 1.0	1845	33.3	16.0	30.30
Small peasants	1.0 - 2.0	1563	1869	13.6	17.15
Semi-Medium peasants	2.0 - 4.0	2537	2593	22.1	23.80
Medium peasants	4.0 - 10.0	3175	2393	27.6	21.05
Large peasants		2360	839	20.7	7.70
	Total	11480	10898	100.00	100.00

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As above table shows that the Area of Marginal peasants has increased from 16 per cent to 30.3 per cent. In spite of enforcement of Bihar Land consolidation Act 1956. The No. of marginal peasants has increased from 64.3 per cent to 76.65 per cent which shows the failure of land reforms.

### ***(v) Fixation of Ceiling of land holdings***

Ownership of land is unequal in Bihar. On the one hand, there are so many people who has large land and on the other hand, many of people" have no much land that even he may fulfil their food requirements, i.e. they are landless. For removing these differences, Bihar government has passed fixation of ceiling of land holding Act in 1961. The main purpose of enforcement this act is that the land which is over fixation of ceiling will be taken by government and these land will be distributed among landless peasants.

### ***(vi) Co-operative farming***

Co-operative farming was started in 1952 in Bihar. This reform had been advocated to solve the problems created by sub division of holdings. The idea was that farmers having very small holdings should join hands and pool their lands for the purpose of cultivation. In Bihar, there are 80.2 per cent marginal peasants who possess 36.2 per cent operational holdings and 0.2 per cent large peasants who possesses 4.5 per cent operational holdings . The government of Bihar has launched a new programme which is known as "Package Programme which has been started in different districts.

## **Suggestions**

In above discussion, it is tried to point out so many programmes introduced in Bihar for land reforms. In spite of this Successful results have not achieved. It does not mean that results is zero. It has changed rural composition of Bihar. For successful implementation of land reforms the following steps have to be raised.

- (i) Excess land taken over from big landholders should be distributed expeditiously and to assist the land reform beneficiaries there is a strong need to link them for timely supply of inputs and investment to Jawahar Rozgar Yojana/Prime Minister's Rozgar Yojana.
- (ii) Priority should be given to preparation, maintenance and computerization of land records. All tenants including share croppers should be identified and their rights should be recorded and permanent heritable rights should be conferred on them

on the lines of "Operation Barga" Implemented by the West Bengal Government in a campaign mode. Certified extract of the record should be issued in the form of updated "Farmer Passbook" or otherwise.

- (iii) No transfer of agricultural land should be permitted to a man-agriculturist.
- (iv) Resumptions of land by landowners from tenants for self cultivation should not be allowed except in case of physically handicapped or serving army personnel.
- (v) In case of a dispute between the landowner and the persons claiming to be tenants/sharecroppers, the onus of proof should be shifted to the landowner. The tenant/share-cropper should be allowed to deposit the share of the produce of the land owner with the nearest authority.
- (vi) Political will should be created. For this land-less small and marginal farmers' representatives should be given representation in local panchyat bodies and ministries so that they are associated at each decision making level.
- (vii) The poor peasants may be provided legal aid upto the level of the Supreme Court. The Lok Adalats should be empowered to dispose of land reform litigations along with prompt disposal of cases by rural courts i.e. Nyaya Panchyat/rural Nyayalaya.

With above discussion it is clear that if all above mentioned points are cared then land reforms programmes may be implemented successfully. If land reforms is done successfully then the productivity of agriculture will increase automatically. The Peasants of Bihar will also be prosperous and in rich condition. Govt, should also take, effective steps to implement these programmes. Only to m law is not sufficient. If political will is not sufficient then No programme can be success.

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# Analysis of Demand and Participation in MGNREGA Employment

\*Dr. K. Hanumantha Rao & \*\*Dr. C. Dheeraja

## Introduction

The development planning has helped Indian economy in several fronts, given the initial conditions at the time of independence. However, India has yet to realize its prime goal i.e. provision of decent life for all on a sustainable basis. The major development challenges of the country today include high levels of poverty and malnutrition and also sluggish growth of agriculture sector which continues to be the key source of rural livelihoods. In an economy where the poverty is correlated with high levels of open unemployment and under-employment and low wages, the state has to intervene to supplement the normal employment opportunities provided by the various development sectors. Innovative planning of wage and self employment programmes would not only generate additional gainful employment but as well strengthen the infrastructure for stimulating further growth of the key sectors like agriculture. The National Rural Employment Guarantee Programme of 2005 is expected to address some of the major concerns of rural labour market as well as agriculture and thereby ensuring livelihood security of millions of rural households.

A critical analysis of the functioning of the rural labour markets and performance of agriculture in the last two to three decades reveal that the labour markets are characterised by large scale under – and unemployment, high levels of distress migration, casualisation( over 33 per cent), gender bias [in terms of labour force participation rates

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and worker status (main / marginal worker), wages, participation in low paid occupations and duration of participation in the labour market]. These biases also are responsible for the skewed distribution of food and other resources within the household leading to high levels of child malnutrition (over 45 per cent) and chronic energy deficiency among adult women (40 per cent). The vulnerability of the agriculture sector continues to be high since nearly 60 per cent of the sown area is under rainfed conditions and investment in agriculture related infrastructure has not been adequate to achieve the targeted growth of 4 per cent and to generate gainful employment to the dependent workforce. These distress conditions in the labour market and agriculture have led to the agrarian crisis and slow pace of reduction of rural poverty.

So, it is unambiguously clear that most of the rural labour would be keen on seeking gainful employment so as to secure livelihoods. So, guaranteed and productive employment will have significant impact on the human resources development (of the poor) even while reducing the push migration to the urban areas. The state intervention in the labour market should be such that it should impact the market wages in the backward regions which are usually lower than the (state stipulated) minimum wages. If, such interventions in the labour market contribute to revitalization of (dryland) agriculture, then the overall impact would be more rewarding. The National Rural Employment Guarantee Act (2005) with elastic budget has the potential to address the above concerns, to a large extent. How the rural labour markets respond to this opportunity and how effective is the planning of NREGS to stimulate the growth factors in rainfed agriculture determine the impact of the scheme.

Conceptualising the decision making process at household level in the context of MGNREGS in backward and developed regions would help in tracing the various factors that impinge on the participation of rural households in the MGNREGS work. The typical decision making in regard to deployment of adult workforce at the household level revolves around some critical factors and these include: size of the household and number of earning members, per capita household income, current levels of engagement in the labour market, prevailing market wages during the peak farm operations and in lean periods, opportunity cost of labour (male and female worker), prospects of migration (as a coping mechanism in periods of distress, as an opportunity to augment household incomes and problems of migration

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(including transaction costs and social costs) and problems of the dependent household members (ill health, child care,...).

In the case of developed regions, the market wage is well above the notified minimum wage and NREGA may not be attractive for the able bodied persons. In those situations, the participation of the aged and the physically weak could be expected in the scheme including that of female workers. The demand for such employment could be more from the farmers if NREGS is converged with other programmes such as land development and plantation of horticulture crops. The piece rate work with ceiling on wage to be paid per day may act as a demotivating factor for the able bodied persons to participate for 8 hours in NREGS. In places where labour productivity is very high, the workers will be willing to participate in the scheme by completing the task in shorter duration; in such cases the effective wage may be closer to the market wage when adjusted for work duration. If labour associations are strong, the implementation of the scheme becomes a challenging task since the NREGA wage in many states was lower than the statutory minimum wage (prior to launching of NREGS). And in such cases, low levels of participation (demand for work) of the workers could be construed as voluntary withdrawal from the scheme.

In the backward areas, the wage differentials between the market and NREGA will be the major driving force for greater participation of the workers. It may affect the economics of stagnant agriculture in these areas and more so in years of low and erratic rainfall. Subject to technical feasibility, the farmers may opt for mechanization of selected farm operations which may even reduce the employment opportunities for the labour in the agriculture sector unless shifts in crop pattern take place in favour of labour intensive crops. Otherwise, the programme may emerge as a main source of household income for the poor and has to be in operation for ever or until the labour force is shifted from agriculture to other occupations.

Further, the capability of the delivery system in providing timely services of such magnitude from a 'rights based' perspective in the backward areas is a moot question. The withdrawal of the workers in, such situations, from the NREGS would be involuntary and in fact in these regions, a typical poor household would be seeking more employment from the programme and in particular in the years of drought. The denial of work, irrespective of the nature of the region, can take place due to administrative and financial constraints.

The provision of work close to the village and flexibility in working conditions (work on piece rate basis and working in groups) is an incentive for the women to participate more in the scheme so that they can attend to the household chores as and when necessary. If the household is a female headed / lone earning member one and also poor then NREGS acts as social security intervention and demand for the NREGS type of work would be high.

In the case of one worker household, the NREGS has to be operated for at least 4 to 5 months for the household to secure its 100 days of assured work at the village level or in its vicinity. In some states, GPs are quite big in terms of area or number of villages and provision of work at village level for the needed households becomes a challenge. In regard to households with two adult workers, the scheme has to be operated for at least two months. In peak agriculture season and during periods of work opportunities in other sectors or in urban areas if NREGS is implemented then the scheme has to run for longer period. In these circumstances, it appears that the workers are voluntarily moving out of NREGS. So, worker households may report involuntary withdrawal in some periods and voluntary withdrawal in some other periods in the same year. This can be avoided if labour budgets with seasonality are prepared by the key stakeholders in a participatory manner.

If workers are not aware of their rights and entitlements then they may not report unmet demand since they view it as a supply driven programme. The existing NREGA architecture may not be adequate enough in some regions to generate the required employment to meet the employment demand as and when required. The systems to capture the demand periodically if do not either exist or not effective, then the chances of supply being shown as the demand are very high. In such cases, the unmet demand would be shown as zero even when the demand – supply gap does exist. The supply side problems such as poor fund flow management, inadequate number of technically and administratively approved schemes in the pipeline, inadequate and less competent manpower, delays in measurement and payment of wages would reduce the efficiency and effectiveness of the programme management and also act as disincentive for workers to participate in the NREGS. If the implementing agency does not have a pro-poor bias, then the allocation of work among work seeking households might be skewed and one would notice a set of households with high levels of participation even when the average number of working days per

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household in the Gram Panchayat is on decline. The former group with its close interactions and proximity to the delivery system would gain from the scheme which can happen due to several factors such as political affiliation, caste, loyalty to local elite, etc.

The workers may opt out of the NREGS both in backward and developed regions in certain circumstances such as ill-health, economic prosperity of the household compelling them to withdraw from the unskilled / manual work, cultural taboos(eg., objection to carry mud loads on head by muslim women) and better employment opportunities ( in terms of wage, nature and duration of work) etc.

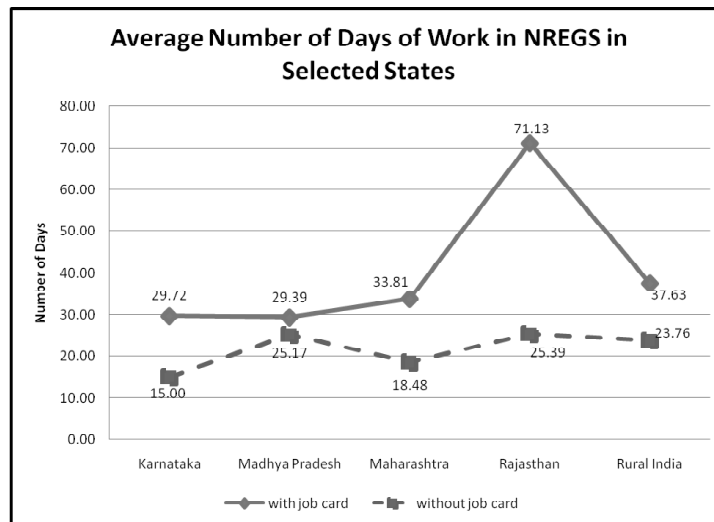
### **Unmet Demand for Work in MGNREGS: A Macro View**

MGNREGS is a demand driven wage employment programme with huge outlay but in the field due to various problems the delivery system has not been able to provide employment on demand in all the periods and in all the States. Several research studies have also pointed out the failure of the delivery system in ensuring guaranteed employment. However, this statement contradicts the official statistics which reveal that the delivery system is highly responsive and able to generate work as and when demanded. The field studies reveal cases of rejection / denial and also non-fulfillment of the total demand (in number of days). This aspect has been further examined using an independent data base. The 66<sup>th</sup> round of NSS (2009-10) with a large coverage of households provided data on the employment situation including accessing NREGS work. Using this database, an attempt is made to capture the governance deficit of the MGNREGS in terms of denial of job cards and denial of work to those seeking. Based on certain assumptions the unmet demand in terms of denial of work (employment days per household) was estimated under this guaranteed employment programme.

### **Discussion on Results**

The estimated number of rural households was 162.5 million in 2009-10 as per the 66<sup>th</sup> Round of National Sample Survey data. About 56 million of these households have participated in the MGNREGS (34.5 per cent) while the corresponding figure as per official statistics was 52.5 million. However, the employment days generated under MGNREGS widely differed between the two sources. NSS estimate was 1.47 billion days which was only 51.9 per cent of the reported value as per the official statistics.

The ‘job card’ is an entitlement of the households for seeking work in NREGS, but cases of denial of job card are not uncommon. The details of households with and without job cards are presented in Table-1. About 14.6 per cent of the rural households were not possessing job cards but were seeking work in 2009-10. A small proportion of these households could even manage to get the work in MGNREGS. Why job cards were denied to the work seeking households needs detailed probe. Interestingly such cases were more (in percentage terms) in backward states of Bihar, Chhattisgarh, Jharkhand, MP, Orissa and West Bengal. It is a disturbing feature that a substantial proportion of the households with job card in the states of Bihar (32.6%), Jharkhand (35.1%), Maharashtra (35.7%) and Orissa (28.7%) were denied work. Further, the average number of days of employment provided per job card owning households in the poorer states was less than the national average of 38 days (Fig below). One would expect certainly higher demand for MGNREGS work in these states compared to that in Haryana (39 days), HP (47 days) and Tamil Nadu (43 days). The average number of days of work provided to households without job card was less than that of households with job card in all the major states. These facts together imply that the official MIS might have failed to capture the true demand for NREGS work in the rural areas of the backward states. This failure to capture the voices of the poor can be construed as a deficit of programme governance.



The percentage of rural households who demanded the NREGS employment (PHHDW) was about 44 at the aggregate level and across  
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states the incidence varied between 19.3 (Haryana) and 81.8 (Tripura) (Col. 11 Table-1). These estimates are derived as follows:

$$\text{PHHDW} = \{A \times (B + D)\} + \{E \times (F + H)\} / 100$$

Where

A: Percentage of households with job cards

B: Percentage of households with job cards who worked in NREGS

D: Percentage of households with job cards who were denied work

E: Percentage of households without job cards

F: Percentage of households without job cards who worked in NREGS

H: Percentage of households without job cards who were denied work

The unmet demand (UD) in terms of households denied work in NREGS

$$\text{UDHH} = \{(A \times D) + (E \times H)\} / 100$$

The column 12 of Table-1 provides estimates of percentage of households with unmet demand (UDHH). At all India (rural) level, the unmet demand was about 20 per cent in 2009-10, a good year with regard to MGNREGS. In the case of MP and Maharashtra, it was about 23-25 per cent while it was low (11-15 per cent) in Karnataka and Rajasthan. The difference between column 12 and col. 11 gives the percentage of worker households seeking and availing the NREGS work. The unmet demand, quite disturbingly, was high in the poorer states like Bihar (36%), Chhattisgarh (16.8%), Jharkhand (31.7%), MP (24.9%), Maharashtra (23.2%), Orissa (28.7%), UP (18.7%) and West Bengal (22.6%).

The official MIS data for 2009-10 did not report the number of days of work sought by the households seeking NREGS work. So, an attempt was made to estimate the unmet demand in terms of (average number) of days per household among the work seeking households. Under assumption I, all the work seeking households will be opting for 100 days of (guaranteed) work in NREGS.

The unmet demand under this assumption, is estimated by

$$\text{UD} = [A \{B \times (100 - C) + 100 \times D\}] + [E \{F \times (100 - G) + 100 \times H\}] / 10000$$

Where C and G are the average number of days of NREGS work provided for households with and without job cards respectively.

In the alternative estimate, it is assumed that average number of working days for the households with job cards (C) is considered as an

estimate of the (real) demand. In this case, the unmet demand is worked out only for those who were denied work with job cards for those participated without job cards and also for those seeking but denied work without job cards.

The unmet demand under assumption II is estimated as follows:

$$UD = [A(D \times C) + E \times \{F(C - G) + HC\}] / 10000$$

The details of participation of the rural households in MGNREGS both with and without job cards in MGNREGS during 2009-10 are given in Table-1, (Columns 13 and 14).

As per the Assumption-I, the unmet demand for NREGS work was 35 days per household and as expected it was higher in the poverty stricken states. For instance, it was over 50 days per household in West Bengal, Chhattisgarh and Madhya Pradesh. The estimates of unmet demand as per Assumption II was about 7.5 days per household and the highest was 11.34 days in Tamil Nadu.

The estimates of households demanding NREGS work and unmet demand for major social groups and occupational groups in rural India are presented in Table-2. The disadvantaged classes like SCs and STs account for 33 per cent of rural households while their share in the total job cards issued was 46 per cent. It is disquieting fact that 46 per cent of ST households and 55 per cent of SC households were not having job cards. It is to be noted that about 28 per cent of these ST & SC households without job cards were seeking NREGS work, while a smaller proportion of these households could able to access NREGS work. This can be interpreted as denial (of job card) of the rights and can be construed as a measure of governance failure. Thus, the governance deficit of MGNREGS captured in terms of percentage of households demanded NREGS work but were not given job cards was varying between 6 to 10.5 per cent across social groups (Gov. Deficit-A). The disadvantage of SC households was also pronounced in terms of the (average) number of days of work provided. It is also clear from Table-2 that relatively less percentage of OBC and OC households were seeking NREGS work; 40 per cent in respect of the former and 34 per cent in the case of latter.

Another measure of governance deficit used in this exercise relate to failure of providing work irrespective of job card possession. [Governance Deficit-B] and it was estimated to be about 20.5 – 22.5 per cent for ST and SC households while for OBC and OC households it was around 19 per cent. The estimates of unmet demand (days/household) were higher by 14-15 days for SC & ST households vis-à-

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vis other groups (under assumption-I). The details in regard to occupational groups were also included in Table-2. The relative deprivation of agricultural labour households was very much evident from the data.

To ascertain the progressive nature and concern for the vulnerable sections by the programme management, the unmet demand for NREGS work for low income classes and single woman households was examined. The promptness of the governance system in responding to the requirement of Bottom 40 per cent and Mid-30 per cent of the rural households (categorised based on per capita household Consumption Expenditure data) as well as the most vulnerable category i.e single women households was ascertained and the information on selected indicators is shown in Table-3.

It can be gleaned from this table that nearly 60 per cent of the low income households (bottom 40 per cent), did not possess the job cards and in respect of single women households it was still higher (i.e 73 per cent). This is disquieting. The average number of days of work per household for middle income households was higher by 8 days compared to low income categories. The denial of work to low income households with job card was as high as 16.3 per cent. In regard to single women households, it was 12.3 per cent. All these indicators can note the retrogressiveness in programme implementation.

The fact that hardly 50 per cent of the low income households were only seeking NREGS work is rather unpalatable given the incidence of casualisation, unemployment and poverty prevailing in rural India.

The governance deficit indicators suggest that the delivery system needs to be motivated to be more pro-poor and gender sensitive.

### **Conclusion**

The NSSO data for 2009-10 did not lend support to the view that NREGA is totally a demand driven scheme. It also brings out to the fore that the delivery system in the economically backward and poverty stricken states such as Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and Orissa are not very much sensitive to the (livelihood) needs of the poor (Bottom 40 per cent of the rural households) and to the vulnerable conditions of the single women households. The governance deficit was captured in terms of percentage of households denied job cards, percentage of households denied work irrespective of possession or non-possession of job cards and the unmet demand. The

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share of SC households in job cards and their share in NREGS employment during 2009-10 was of similar order i.e. 30 per cent. However, these SC households were at disadvantage in respect the average numbers of working days per household. Among the occupational groups, the agriculture labour households were (relatively) deprived. Under the assumption of provision of full 100 days of employment for each household seeking work, the state has to generate another 35 days per household.

**Table 1: Household with Job Cards and Participation in MGNREGS Work- (2009-10)**

S.No.	State	% of Households with job card				% of Households without job cards				% of HHs Demanded work	% of HHs reporting Unmet Demand	Unmet demand per HH (in days) @	Unmet demand per HH (in days) @@
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				
(1)	(2)	A	B	C	D	E	F	G	H	I	J	K	L
		% HHs with job cards	Worked days	Average days	Denied work	% HHs without job cards	Worked	Average days	Denied work				
1	Andhra Pradesh	43.4	79.6	46.67	8.6	56.6	1.5	38.99	14.2	47.17	11.77	30.71	5.56
2	Bihar	17.2	49.6	26.30	32.6	82.8	1.2	7.92	36.7	45.52	35.99	43.20	9.65
3	Chattisgarh	58.9	79.8	35.37	9.1	41.1	2.3	26.75	38.3	69.05	21.10	52.17	7.54
4	Gujarat	30.0	59.2	24.84	15.9	70.0	0.6	8.51	17.2	34.99	16.81	30.54	4.24
5	Haryana	6.6	76.2	39.26	16.7	93.4	0.1	6.89	14.0	19.30	14.18	17.32	5.60
6	Himachal Pradesh	45.4	73.5	47.50	10.1	54.6	0.0	10.00	7.1	41.83	8.46	25.98	4.02
7	J & K	19.0	40.0	34.82	36.9	81.0	0.8	14.63	19.4	30.97	22.73	28.23	8.04
8	Jharkhand	30.6	49.5	23.28	35.1	69.4	2.4	17.88	30.2	48.51	31.70	44.69	7.47
9	Karnataka	15.1	53.0	29.72	18.1	84.9	0.0	15.00	14.2	22.79	14.79	20.41	4.40
10	Kerala	19.6	55.1	26.29	15.0	80.4	0.5	23.79	11.3	23.23	12.03	20.29	3.17
11	Madhya Pradesh	69.7	51.7	29.39	17.3	30.3	4.4	25.17	42.5	62.30	24.94	51.38	7.38
12	Maharashtra	13.4	32.8	33.81	35.7	86.6	0.0	18.48	21.3	27.62	23.23	26.14	7.85
13	Orissa	40.4	53.5	26.39	28.7	59.6	0.6	33.18	28.7	50.67	28.70	44.85	7.55
14	Punjab	8.6	59.9	30.50	22.0	91.4	0.0	5.00	26.4	31.17	26.02	29.60	7.94
15	Rajasthan	71.0	82.9	71.13	8.1	29.0	0.8	25.39	20.4	70.76	11.67	28.83	8.40
16	Tamil Nadu	39.6	83.3	43.04	5.4	60.4	1.2	25.27	39.6	59.77	26.06	45.39	11.34
17	Tripura	80.1	96.3	61.09	3.3	19.9	0.8	35.99	9.5	81.83	4.53	34.65	2.81
18	Uttaranchal	34.3	78.1	23.00	13.9	65.7	0.5	22.15	9.8	38.32	11.21	32.09	2.58
19	Uttar Pradesh	21.1	75.2	31.28	12.5	78.9	0.5	34.67	20.4	34.99	18.73	29.89	5.85
20	West Bengal	59.3	72.1	16.80	19.4	40.7	0.8	11.92	27.3	65.70	22.62	58.47	3.82
	Total	34.8	68.3	37.63	16.1	65.2	0.7	23.76	21.7	43.98	19.75	34.92	7.50

@: Assuming 100 days demand for all work seeking households.

@@: Assuming all work seeking households will be given the average work (in days) provided to households with job card.

Source: NSSO (2011); "Employment and Unemployment Situation in India", 66<sup>th</sup> Round (July 2009- June 2010), GoI, New Delhi.

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**Table 2: Estimates of Demand for MGNREGS work and Unmet Demand**

	Social Class				Occupation Group		
	ST	SC	OBC	Others	Ag. Lab.	SE in Ag.	Other Lab.
• No. of Rural Households (Million)	17.6	36.1	68.6	40.1	41.6	51.8	23.9
As % of Rural Households	10.86	22.22	42.22	24.68	25.63	31.93	14.75
• HHs with job cards (%)	54.3	45.1	30.7	24.0	51.6	32.6	41.2
- % Share in total job cards	16.96	28.78	37.21	17.03	38.02	29.91	17.50
- Worked in NREGS (%)	72.2	72.3	66.6	61.3	74.7	62.9	73.8
- Average number of days of work	42.32	34.79	42.23	26.88	32.18	42.50	43.78
- Denied work in NREGS (%)	15.5	16.4	13.8	20.8	14.9	15.7	15.4
• HHs without job cards (%)	45.7	54.9	69.3	76.0	48.4	67.4	58.8
- Worked in NREGS (%)	1.7	0.8	0.7	0.5	1.7	0.4	1.2
- Average number of days	27.15	17.48	24.63	25.20	27.14	33.76	16.48
- Denied work in NREGS (%)	26.5	27.6	20.9	17.9	29.6	19.7	24.8
- Households Demanded NREGS work (%)	60.51	55.60	39.65	33.69	61.38	39.17	52.04
- HHs with job cards but not seeking work (%)	12.3	11.3	19.6	17.9	10.4	21.4	10.8
• Governance Deficit – A* (% of HHs)	6.21	10.50	8.95	9.69	9.78	6.57	10.84
• Governance Deficit – B† (% of HHs)	20.53	22.55	18.72	18.60	22.01	18.40	20.93
• Unmet demand per HH (in days) @	43.71	44.17	30.90	29.64	48.76	30.37	38.61
• Unmet demand per HH (in days) @@	8.80	7.92	7.99	5.00	7.13	7.84	9.35

@: Assuming 100 days demand for all work seeking households.

@@: Assuming all work seeking households will be given the average work (in days) provided to households with job card in each category.

Source: NSSO (2011); “Employment and Unemployment Situation in India”, 66<sup>th</sup> Round (July 2009- June 2010), GoI, New Delhi.

**Table 3: Governance Deficit under MGNREGS with reference to low and middle income households and Single Women households (2009-10)**

Indicator	Bottom 40 %	Mid 30 %	Single women Households
• % HHs with job card	39.4	26.4	27.1
- Provided work (%)	69.4	64.0	69.9
- Average number of days of work	36.5	44.4	37.20
- Denied work (%)	16.3	15.7	12.3
• % HHs without job card	60.6	73.6	72.9
- Provided work (%)	1.0	0.3	0.5
- Average number of days of work	21.1	53.6	4.65
- Denied work (%)	24.8	16.9	19.2
- Households Demanded NREGS work (%)	49.40	33.70	36.64
- Governance Deficit – A* (% HHs)	10.00	7.30	9.54
• Government Deficit –B† (% HHs)	21.45	16.58	10.14
• Unmet demand per HH (in days) @	39.29	26.08	29.57
• Unmet demand per HH (in days) @@	7.92	7.35	7.81

@: Assuming 100 days demand for all work seeking households.

@@: Assuming all work seeking households will be given the average work (in days) provided to households with job card in each category.

Source: NSSO (2011); “Employment and Unemployment Situation in India”, 66<sup>th</sup> Round (July 2009- June 2010), GoI, New Delhi.

# Agricultural Farmers' Suicides in Warangal Distt. of Telangana

Dr. Jagan Kanthi

## Abstract

The suicide incidence is happening at a higher rate in states like Telangana, Andhra Pradesh, Maharashtra, Karnataka, Punjab and Kerala with input-intensive cash crop cultivation. One of the most disquieting developments in the era of the neo-liberal policy in India has been widespread occurrence of farmers' suicides in different parts of the country. The government did not wake up for many years to attend to this phenomenon. It is estimated that more than three lakh farmers committed suicide. This is indeed a black mark on the economic performance of the government. Farmers are belong to different caste groups and not only small and marginal farmers but even those owning larger holdings. The suicides of the breadwinner, whether young or old, leave the families desolate and disrupt the social order. The disillusionment of agriculture, such as repeated crop failures mainly due to inability of farmers to pay for high cost of pesticide, chemical fertilizer, HYV seeds and the genetically modified seeds such as the Bt. Cotton, declining productivity of land, absence of extension machinery of the government, a sharp rise in input costs, absence of support price, increase in cash crop cultivation, and the absence of adequate irrigation facilities, as conditions that lead to farmers' suicides. To quote it, 'Repeated crop failures, inability to meet the rising cost of cultivation, and indebtedness seem to create a situation that forces farmers to commit suicide. The study found that, maximum number of farmers committed suicides' are in between 1 and 2.5 acres.

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The highest percentage of farmers committing suicides in backward classes (BC) with about 65.64 per cent, followed by Scheduled Castes group of farmers with 16.56 percentages of total deceased farmers.

***Key words:** Caste, Occupation, Cropping pattern of the victim families*

### **Introduction**

The realm of agriculture in India in the post-reform period have brought about a severe crisis in rural India that manifests itself, among other things, in the ongoing incidence of suicide among farmers. This incidence is happening at a higher rate in states like Telangana, Andhra Pradesh, Maharashtra, Karnataka, Punjab and Kerala with input-intensive cash crop cultivation. one of the most disquieting development in the era of the neo-liberal policy in India has been widespread occurrence of farmers' suicides in different parts of the country including not only the drought prone areas of Telangana, Andhra Pradesh, Karnataka and Maharashtra but also a state of heavy rainfall like Kerala, as also a state like Punjab with large areas under irrigation. With the preoccupation of the government with the rate of economic growth and promotion of the private sector in the secondary and tertiary sectors, that is, industrial and service sectors, the agricultural sector and the sector of rural development were neglected. The government did not wake up for many years to attend to this phenomenon. The Reserve Bank, forgetting its responsibility for the agricultural and rural sector, started concentrating on what it considered to be its legitimate concern, namely, monetary policy and sound banking, mainly measured in terms of profit and loss. It is estimated that more than three lakh farmers committed suicide. This is indeed a black mark on the economic performance of the government. Farmers are belong to different caste groups and not only small and marginal farmers but even those owning larger holdings, which in the context of dry agriculture are not enough to enable the farmers' families to take out livelihood. The suicides of the breadwinner, whether young or old, leave the families desolate and disrupt the social order.

The disillusionment of agriculture, such as repeated crop failures mainly due to inability of farmers to pay for high cost of pesticide, chemical fertilizer, HYV seeds and the genetically modified seeds such as the Bt. Cotton, declining productivity of land, absence of extension machinery of the government, a sharp rise in input costs, absence of support price, a sharp increase in cash crop cultivation, and the absence

of adequate irrigation facilities, as conditions that lead to farmers' suicides. To quote it, 'Repeated crop failures, inability to meet the rising cost of cultivation, and indebtedness seem to create a situation that forces farmers to commit suicide. However, not all farmers facing these conditions commit suicide it is only those who seem to have felt that they have exhausted all avenues of securing support have taken their lives. It is not only the landed who have a crisis of indebtedness to deal with. There were a number of landless families who had leased land on a short-/long-term basis by securing loans Many such families were caught up in cycles of debt and destitution, which ultimately led to the suicide of the head of the family' (TISS Report 2005: iii-iv). The Report further says that 'Life histories and case studies conducted for this study reveal that there has been sharp increase in the dependence on loans to enable cultivation.

### **Review of Literature**

Chowdry, K.R., (1998)<sup>1</sup> conducted a study covering a sample of 92 households of farmers who committed suicide. The major cause reported by most of the victims' households is accumulated debts for digging or deepening of wells. The bore wells many a time failed and consequently the crops are also failed. The resulting inability to repay the loans and the feeling of threatened self-respect acted as the triggers for farmers suicides.

Revati (1998)<sup>2</sup> felt that there were some missing issues farmers' suicides. Firstly, she pointed out that irrigation was an implicit cause for the soaring debts on the farmers. The cotton farmers of Warangal almost entirely depended on private irrigation. She observed that in the creation of private irrigation, farmers made heavy investment that led to accumulation of debts. Secondly, she ascribed the sources of credit as another reason for the farmers' suicides. She pointed out that most of the studies conducted in the district revealed that it was the commission agents and the pesticide dealers meet the credit needs of the farmers. They charged 15 to 20 percent higher price over the normal price.

Reddy.D.N. and Mishra Srijit (2009)<sup>3</sup> discussed the nature and causes of agrarian crisis and rural distress. They discussed the structural changes in employment across the sectors and within the rural areas. They observed that the marginalization of holdings and emergence of small holdings increased as a numerically dominant to Indian agriculture. The resource stress in agriculture and the

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deceleration of agricultural growth are experienced in the post reform period.

Mallika Kaur (2010)<sup>4</sup> opined that the rising number of farmer suicides in the Punjab region of India exposes the problem of extreme rural insecurity, Punjab's agricultural output increased manifold when the Central Government chose Punjab as the site for the "Green Revolution" in the 1960s. Three decades later, without any alternate source of employment, small and marginal farmers of Punjab continued to pursue the environmentally and economically unsustainable agricultural practices of the Green Revolution, while accumulating high agrarian debt. Reports of a significant number of farmer suicides are emerging from the region known as India's "bread basket."

Siddharth N. Madare (2012)<sup>5</sup> said that, the existing agrarian crisis in India, which was caused largely by the relative marginalization of agrarian interests in the national policy agenda, is a direct outcome of the economic reforms in India since the 1991. Due to these economic reforms state intervention in agrarian sector is withdrawn and public expenditure is decreased. He also pointed out that withdrawal of state was an integral part of neo-liberal or free-market policy framework that India adopted to become a partner in the increasingly supra-national regime facilitated by globalization discourse. He stated that WTO backed-trade regime pressed for removal of protection and subsidies vis-à-vis agriculture in the third world countries, while the first world countries are allowed to continue with subsidies in the garb of some artificial technicalities'.

### **Objectives**

- To Study the socio-economic factor's of the victimized families,
- To elaborate the occupation and cropping pattern among the suicide families.

### **Methodology**

#### ***Sample Selection***

Warangal District of Telangana State has been selected for this study. 80 percent of the population of this district is living in rural areas and depended on mostly farming paddy, jowar, groundnut, castor, cotton for their livelihood. Among the 51 mandals of this district, 6 mandals were selected to conduct the primary survey. These are namely, Atmakuru, Bachannapeta, Dharmasagar, Geesugonda.

Narmetta, Regonda. The suicide farmers list was collected from the Warangal district collector office. Further, as per the list we have visited to each victim family on convenient basis and interacted with their family members at their availability. For this study total 163 sample respondent's data had been collected.

### Data Collection Tools

Based on the review of literature, especially, socio-economic factors of the farmers' suicide were considered to prepare a structured schedule for primary data collection. Further, questionnaire was divided into two parts, first, basic demographic profile of the victim farmers. Second, socio-economic factors caused for farmers' suicide.

### Mandal – wise selected respondents

Total 163 number of respondents selected from 6 mandals. Majority of them are from Atmakuru (47) and Regonda (30) mandals. Remaining respondents are 26, 22, 22 and 16 from Geesugonda, Bachannapeta, Dharmasagar and Narmetta mandals respectively. Each and every of the respondent is from a deceased family.

*Table 1: Particulars of Mandal wise selected respondents*

S. No	Category	Mandals						Over all Total
		Atmakuru	Bachannapeta	Dharmasagar	Geesugonda	Narmetta	Regonda	
1	< 1 Acre	10 (33.33)	00 (00.00)	03 (10.00)	06 (20.00)	01 (3.33)	10 (33.34)	30 (100.00)
2	1 - 2.5 Acres	25 (35.71)	03 (4.29)	13 (18.57)	11 (15.72)	07 (10.00)	11 (15.71)	70 (100.00)
3	2.5 and above	12 (19.04)	19 (30.16)	06 (9.52)	09 (14.29)	08 (12.70)	09 (14.29)	63 (100.00)
Total		47 (28.83)	22 (13.50)	22 (13.50)	26 (15.95)	16 (9.82)	30 (18.40)	163 (100.00)

Source: Primary Data

The selected respondents from the victims' families are categorised into three groups according to size of holdings. First group consists of farmers with less than one acre, while the second and third groups with 1 to 2.5 acres and 2.5 acres and above respectively. Overall, the

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highest numbers of farmers are in group two followed by 63 farmers in group three. It is observed that the largest numbers of farmers are found in group two in all the mandals except in Bachannapeta Mandal. No selected farmer is found in Bachannapeta mandal in the first group (that is less than 1 acre group). In the first group only one farmer in Narmetta mandal and three farmers in Dharmasagar mandal are found. In the second group, highest numbers of farmers are found in Atmakuru and Dharmasagar mandals. Overall, the maximum numbers of farmers committed suicides are found to be in the second group (that is between 1 and 2.5 acres). The chi-square results for mandal and land holdings are found to be significant ( $\chi^2= 33.934$ ;  $df= 10$ ;  $p<.001$ ) prompting us to reject the null hypothesis that there is no relationship between Mandals and land holding size. The land holdings do seem to significantly differ between Mandals.

### **Social Profile of the Deceased Farmers and their Households**

#### ***Caste Composition of the Deceased Farmers***

Caste in Indian society is a reality. The caste system has been prevailing in the country for centuries. Caste plays an important role in the life of the people of the country. Caste dictates not only social relations but also various forms of exploitation, oppression and violence against the SCs, STs and other backward caste people. People belonging to lower castes in the society are suffering in several ways especially in rural areas. Although innumerable reforms are advocated and practised by a number of social reformers such as Mahatma Phule, Dr B.R. Ambedkar, etc, all the efforts of these great social reformers are proved to be in vain. The social discrimination in the name of caste is still continuing, which is manifested in various forms including untouchability; no entry into temples; two glass systems, etc. No headway is made in the struggle for caste annihilation. STs are no better than SCs. People belonging to backward classes are also suffering from social discrimination. Farmers of all these castes fail to get any sympathetic support from upper castes. Among the 163 deceased farmers in the selected mandals, only 18 farmers belonged to the other castes. This shows that the farmers of weaker sections suffered the most from insults, insuations, threats and violence which led to their suicides. Whether we like it or not, farmers' suicides have happened due to caste factor also.

**Table: 2** Caste compositions of deceased farmers

S. No.	Category	Caste				Overall
		SC	ST	BC	OC	
1	Below 1 Acre	06 (20.00)	03 (10.00)	19 (63.33)	02 (6.67)	30 (100.00)
2	1 - 2.5 Acres	13 (18.57)	04 (5.72)	47 (67.14)	06 (8.57)	70 (100.00)
3	2.5 and above	08 (12.70)	04 (6.35)	41 (65.08)	10 (15.87)	63 (100.00)
Total		27 (16.56)	11 (6.75)	107 (65.64)	18 (11.05)	163 (100.00)

Source: Primary Data

Particulars of caste-wise distribution of deceased farmers are presented in Table 1.2. It is observed from the Table that the highest percentage of farmers committing suicides was in the group of backward classes with about 65.64 per cent, followed by SC group of farmers committing suicides with 16.56 percentages of total deceased farmers. The chi-square results show that there is no link between size of the land holdings and caste group ( $\chi^2= 3.838$ ;  $df= 6$ ;  $p= >.10$ ). Only OC's have better support networks to deal with losses. Hence we have to accept the null hypothesis that there is no relationship between caste and land holdings of farmers who committed suicide.

### **Occupation of the Members of the Households of the Deceased Farmers**

In the selected mandals, farming is the major activity, whereas non-farm activities are only marginal. One of the major causes for farmers' distress and suicides is lack of non-farming economic activities in this area. It is observed from the Table 5.4 that about 60 percent of the family members are working on their own farms. About 35 percent of the family members are found to be working in others' farms. It is found that a higher percentage of farmers' family members are engaged in non-farming activities in group one, followed by group two and group three farmers' family members. It shows that non-farming activity is directly related to size of the holding.

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*Table 3: Particulars of occupation of the members of the decreased farmers*

S. No.	Category	No of HHs	Working own farm	Working other farm	Non-farm activity	Overall
1	< 1 Acre	30	59 (52.21)	39 (34.51)	15 (13.28)	113 (100.00)
2	1 - 2.5 Acres	70	135 (58.95)	84 (36.68)	10 (4.37)	229 (100.00)
3	2.5 and above	63	148 (64.07)	78 (33.77)	05 (2.16)	231 (100.00)
Total		163	342 (59.69)	201 (35.07)	30 (5.24)	573 (100.00)

Source: Primary Data

### **Cropping Pattern**

Details presented in Table – 1.4 (Cropping pattern) are one of the most important components of agricultural economy. A thorough change in the cropping pattern has taken place in the district during the last three decades. In the place of millets such as jowar, bajra and oil seeds including castor and some pulses, new crops are introduced in the district. Some of the old crops have disappeared. Cotton, maize and sunflower have replaced the traditional crops. Most of the selected deceased farmers are dry land farmers. While a small number of farmers is wet land farmers, raising paddy. Farmers avail irrigation facilities to a small extent for the crops like paddy, chilies, vegetables and cotton etc. Largest area cultivated by the selected farmers is under cotton. About 83 percent of the cultivated area of the selected farmers is under cotton.

This is followed by paddy with about 11 percent and maize with 5 percent of the cultivated area of the selected farmers. It is also noted that no farmer in category -1 has cultivated maize. The category- 1 farmers cultivated only about 7 percent of the total cultivated area of all the farmers at an overall level.

**Table 4:** *Cropping Pattern of selected farmers (Total area in acres)*

S. No.	Category	Crops			Total area (in acres)
		Cotton (in acres)	Paddy (in acres)	Maize (in acres)	
1	< 1 acre	26.00 (89.66)	03.00 (10.34)	00 (00.00)	29.00 (100.00)
2	1 - 2.5 acre	132.80 (95.20)	03.70 (2.65)	03.00 (2.15)	139.50 (100.00)
3	2.5 and above	182.00 (75.37)	40.00 (16.56)	19.50 (8.07)	241.50 (100.00)
Total		340.80 (83.12)	46.70 (11.39)	22.50 (5.49)	410.00 (100.00)

Source: Primary Data

### Conclusions

While discussing the issue of ‘suicides’ stated that suicide is one of the most selfish, cowardly and irresponsible act that a person can commit. The one who commits suicide leaves a family and friends behind. It is not an isolated act committed in a vacuum. It brings humiliation and disgrace to their family members. The first and foremost contributory factor for farmers’ suicides is their indebtedness. A farmer committed suicide because of debt trap, since the loans outstanding piled up over a period of time. Crop loss emerged as the second major factor forcing farmers to end their lives. The crop loss is mainly due to adverse seasonal conditions, lack of irrigation, pests and disease attack, inferior quality of seed etc. The input related problems are the seed, fertilisers, pesticides, irrigation, credit etc. Not only the quality of inputs is inferior but also their prices are very high. After the death of the farmer, who is generally the head of the family, the remaining members of the family have a greater sense of insecurity. Social stigma is also attached to them. They lack a reliable source of income and are ensulted by fear of survival. The lenders start harassing them for repayment immediately after the death of the farmer. Lack of capital and credit also threaten their lives and they could not continue their cultivation. If a male farmer commits suicide, the female members of the deceased family face a lot of difficulty in continuing the agriculture.

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# Perceptions on Existing Delivery Systems on Vulnerability and Enhancing Adaptive Capacity in Climate Change in Udaipur District of Rajasthan

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## Abstract

Agriculture and climate change are inextricably linked. Climate change threatens agricultural production through higher and more variable temperatures, changes in precipitation patterns, and increased occurrences of extreme events such as droughts and floods. It may also alter the quality of natural resources and adversely affect the livelihood of farmers. Agriculture is, however, also part of the solution, offering promising opportunities for mitigating Green House Gas (GHG) emissions through carbon sequestration, better soil and land use management, and increased biomass production. The climate change impacts on agriculture will vary over time and across locations, depending on different agro – eco systems, farming systems, and production conditions. Likewise, strategies and measures for coping with those impacts will need to be adjusted to the variable circumstances of farmers in diverse agro – ecological situations.

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## **Introduction**

Climate is an important determinant of the geographical distribution, composition and productivity of vegetation. Therefore, the climatic changes have profound implications for rural livelihoods, industry, biodiversity, soil and water resources and hence, Indian economy. The climate change induced effects would aggravate the existing stresses due to non-climatic factors, such as land use changes and the unsustainable exploitation of natural resources. Global climate change will increase the stress on agricultural systems by potentially decreasing yields at the very time when demand for food is growing dramatically. Like hunger, the stresses that arise from rapid climate change will fall most heavily on the poorest, the most vulnerable, and those least able to adopt new technology. Climatic extremes, not only with respect to the variability of the temperatures, but also increase in average temperatures coupled with erratic and low precipitation constitute the greatest risk to agriculture (Parry and Duinker 1990).

The change in climate has two broad types of effects on agriculture; effect on the geographical limits to the regions where different types of crops and livestock can be produced and effects on potential yields of crops and livestock in these regions. The effects include, increased growing season, extended margin of the potential cropping and grazing in mid-latitude regions, which may reduce the yield potential in core areas of current production as increased temperatures encourage more rapid maturation of plants and shorten the period of grain filling and extended geographic range of some insect pests. The effects also include, changes in crop types, irrigation management, fertilizer use, soil drainage and erosion and farm infrastructure. The climate change effect density of livestock population and yield.

Developing countries are particularly vulnerable to climate change, due to their often higher expo-sure to weather and climatic extremes and climate variability. Furthermore, their economies are often highly dependent on climate-sensitive resources, whereas their adaptive capacity is relatively low. It is predominantly the poor who will be affected disproportionately. Climate change affects key development sectors such as agriculture, water and human health (Satapathy2011).

A key element in coping with climate change and supporting agriculture is information; it may be climatic information, forecasts, adaptive technology innovations, or markets—through extension and information systems. Besides information, adaption and mitigation efforts also require education, and technology transfer. Agricultural

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extension and advisory services, both public and private, thus have a major role to play in providing farmers with information, technologies and education on how to cope with climate change. It is in this background, the present study with Farmers and Officials on “Perceptions on Existing Delivery Systems on vulnerability and enhancing adaptive capacity in Climate Change in Udaipur District of Rajasthan” and evolved constraints and suggestion for improvement was undertaken with the following objectives.

### **Objectives**

- To understand the existing delivery systems of Udaipur district
- To assess the farmers and officials perceptions on existing delivery systems, constraints and suggestion for improvement

### **Methodology**

The Present study was conducted in Udaipur district of Rajasthan state. A detailed questionnaire was prepared and pre-tested in accordance with the methodological procedures of the study. The data from the two categories of respondents were collected with a pre-tested interview schedule from different stakeholders at village, tehsil and district level. A representative sample from officials' category and farmers in different agro ecological situations in the districts were selected. The opinion survey of 60 farmers as well as 51 field officials, functioning at different levels – village (34 officials), tehsil (9 officials) and district (8 officials) was carried out so as to ascertain the adequacy, performance and constraints in delivery system of institutional programmes.

### **Results and Discussions**

#### ***Existing Delivery System of Udaipur District***

The Udaipur district has the benefit of being the divisional headquarters of southern Rajasthan, strong set up for line departments and State Agricultural University to cater the needs of research and training needs, etc. With the strengthening of Panchayat Raj system, the local level set up of developmental departments has to work under the Zila Parishad at district level, Panchayat Samiti at block level and Gram Panchayat at village level. The grass root level officials of various development departments coordinated and integrated efforts are helpful for the common goal of improved livelihood of the farming community.

***Department of Agriculture***

The district has a strong set up under the Department of Agriculture. The mandate of the department includes transfer of technology for sustainable farming, improvement in crop productivity, crop diversification and value addition, cost-effectiveness, drudgery reduction (specially for women) in farmwork. The department organizes human resources development activities for practicing farmers and supporting field functionaries. The HRD programme for farmers includes one day field training for male and female farmers, institutional trainings at KVKs for two to three days and exposure visits for 7 to 10 days. The training themes include programmes for pulses, oilseeds, cereals, other crops, with technologies like IPM, INM, organic farming, vermin compost; sprinkler system for water use efficiency, use of improved implements, etc.

***Department of Horticulture***

The department focus on: (i) To increase the area, production and productivity of fruits, vegetable, spices and floriculture crops; (ii) Introduction of high yielding, disease free and true to type varieties of fruits, vegetable, spices crops through layout of demonstration and minikits in the selected areas; (iii) Increasing the production of high quality grafted plants of mango, guava, aonla, ber, etc. nurseries and supply to the farmers; (iv) Training of farmers and extension workers to recent technology based on research for the area.

***Department of Soil and Water Conservation***

The Department of Soil and water Conservation work with the stipulated goal of utilizing the land according to its capability; conservation of maximum possible rain water at place where it falls; putting adequate vegetal cover on the soil for controlling soil erosion, mainly during rainy season; draining out excess water with the safe velocity and storing it in ponds/anicuts for future use; maximizing productivity per unit area, per unit time and per unit of water; preventing gully formation and putting nalla bund and gully plugs at suitable intervals to control soil erosion and increase ground water recharge and safe utilization of marginal lands through alternate land use system.

***Department of Animal Husbandry***

The department is responsible for the development of better resource base for animal husbandry sector so that the animal husbandry becomes

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a profitable enterprise for the farmers of the state. The local breed which are capable of withstanding the extreme climatic variations are preserved by the department. Apart from veterinary services, efforts are made for the supply of balanced diet for the animals.

The department manages the conduct of animal fairs of local, regional and state level, as it is the major means for the sale and purchase of animals in the state. The programmes like integrated livestock development, A.I. services, disease control, vaccination against foot and mouth diseases, poultry development programmes sheep and goat development programmes, fodder production etc. are also taken up by the department.

### ***Department of Fisheries***

The perennial water bodies in the state provide opportunities for fisheries as a means of livelihood for atleast some sections of the population in selected areas. Udaipur district has many tanks and ponds including Jaisamand lake with a lot of potential for fisheries. The centrally sponsored programmes like Fish Farmer's Development Agencies (FFDAs) and the national programme for fish seed development are major programmes.

### ***Department of Ground Water***

The ground water sources play a major role in the supply of rural drinking water as well as water for irrigation in the state. The department has two major wings, namely (i) Engineering Wing and (ii) Hydrological Wing. The Engineering Wing is responsible for drilling and blasting activities for government and private sectors and functions as a commercial unit. The hydrological wing is responsible for ground water survey, monitoring of ground water use, conduct of water balance studies, reporting to state government on policy issues and local ground water sources for private sector.

### ***Department of Water Resources (Irrigation)***

The planning, development, monitoring and maintenance of surface water resources are the responsibility of the water resource (irrigation) department. The mandate of the department includes: (i) planning and implementation of irrigation projects, (ii) maintenance of tanks, dams, canals for irrigation purpose, (iii) distribution of water for irrigation through canal system, (iv) irrigation revenue collection, (v) survey for new dams and recharging of ground water through reservoirs and tanks and (vi) to monitor and plan water distribution system for irrigation.

***Department of Agricultural Marketing***

The Directorate has been entrusted with the responsibilities of implementing the schemes of marketing regulation, grading and quality control, market intelligence as well as administration of the staff of market committees. The responsibilities of developing new market complex, construction of rural link roads, rural primary markets and rural godowns continued with the board.

***Cooperative Departments***

The cooperative system plays a major institutional role in the development of rural areas. The major cooperative institutional set up in Udaipur district include:

- Cooperative credit institutions
- Rajasthan Tribal Area Development Cooperative Federation (RTADCF)
- Dairy Development Cooperatives.

***Maharana Pratap University of Agriculture & Technology (MPUAT), Udaipur***

The bifurcation of Rajasthan Agricultural University and founding of MPUAT at Udaipur was a due appreciation of agro-economic and social requirements of South and South Eastern part of the state and managing all agricultural development programmes through teaching, research and extension education activities as per mandate set forth through a single University in the State. The SAU set up is an added advantage to meet the training needs including specialized trainings in the areas of climatic change, energy application and so on.

***Farmer's Perception on Existing Delivery System Constraints and Suggestions for Improvement***

The opinion survey of 60 farmers as well as 51 field officials, functioning at different levels of village (34 officials), block (9 officials) and district (8 officials) was carried out so as to ascertain the adequacy, performance and constraints in delivery system of institutional programmes. The analysis of the opinion of farmers on input delivery and rural services is summarized below:

***Adequacy of Institutional Programme***

The sample farmer's response on the adequacy of institutional programme is given in Table –1.

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*Table 1: Adequacy of institutional programmes for supply of Inputs/  
rural services*

(No. of Respondents = 60)

S. No.	Item	Adequate	Not adequate
<b>(A)</b>	<b>Agriculture</b>		
1.	Soil Testing	29	31
2.	Seed	51	9
3.	Fertilizers & Pesticides	59	1
4.	Farm Machinery	8	52
5.	Credit	25	35
6.	Transfer of Technology	08	52
7.	Marketing	-	60
<b>(B)</b>	<b>Water</b>		
8.	Water Conservation	28	32
9.	Minor Irrigation	-	60
<b>(C)</b>	<b>Animal Husbandry</b>		
10.	Animal Health	52	8
<b>(D)</b>	<b>Energy</b>		
11.	Conventional Energy	58	2
12.	Non-conventional Energy	19	41
<b>(E)</b>	<b>Marketing</b>		
13.	Market information	10	50
14.	Storage facilities	-	60
15.	Minimum support price	-	60

The supply of conventional sources of energy in rural area has been the only services for which farmers expressed high level of satisfaction. The institutional programmes for the supply of inputs like seed and fertilizer and services like animal health moderate level of satisfaction was expressed by the farmers. On supply of inputs and services like soil testing, farm machinery, credit, transfer of technology, water conservation, non-conventional energy, market information, etc. majority of farmers felt inadequacy of these services. None of the farmers felt satisfied with the institutional arrangement for marketing of farm produce, services like minor irrigation, storage facilities and minimum support price for agricultural commodities.

### ***Constraints in the Delivery System***

The major constraints faced by the farmers in the existing delivery system were ascertained and the responses are summarized in Table -2.

**Table 2: Constraints in Delivery Systems**

(\*=Multiple Response)

<i>S. No. Major constraints in delivery system</i>	<i>Number of respondents*</i>
<b>(A) Agriculture</b>	
1. Lack of good quality seed, fertilizer, pesticides, etc. at reasonable prices	34
2. Lack of marketing facilities	29
3. Scattered land holdings	14
4. Lack of awareness and interest among farmers	14
5. Lack of storage facilities	13
6. Dominance of small holdings	7
7. Lack of irrigation facilities	3
8. Lack of communication facilities	3
9. Lack of modern processing implements, and farm machinery	2
10. Lack of modern technology	2
11. Poor infrastructure	2
12. Poor quality of seeds and pesticides	2
13. The land scope being hilly	2
14. Lack of information about better agricultural practices	2
<b>(B) Water</b>	
1. Very high ground water depth	25
2. Lack of water conservation projects	25
3. Lack of any minor irrigation system	25
4. Lack of good quality water (salty water)	10
5. Lack of rainfall	9
6. Lack of awareness about minor irrigation system, water conservation practices, etc.	7
<b>(C) Energy</b>	
1. Poor economic conditions	29
2. Less availability and high cost	24
3. Lack of knowledge and facilities (lack of awareness)	18
4. Poor infrastructure	17
5. Easy availability of firewood at free of cost	4

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*Contd...*

<i>S. No.</i>	<i>Major constraints in delivery system</i>	<i>Number of respondents*</i>
6.	Conventional energy more powerful than non- conventional	3
<b>(D) Animal Husbandry</b>		
1.	Dominance of local breed (lack of improved breed)	37
2.	Lack of veterinary facility at village level	31
3.	Poor marketing facilities	11
4.	Low price of milk and milk products	7
5.	Lack of good quality feed and fodder	8
6.	Low milk yield	6
7.	Lack of artificial insemination facilities	6
8.	Poor management and lack of knowledge	5

The major constraints in the delivery of inputs felt by the farmers included lack of quality of inputs like seed, fertilizer and pesticides (57%), lack of marketing facilities (48%) scattered land holdings (23%) and lack of awareness and interest (23%) for agriculture; high depth of ground water (42%), lack of water conservation and minor irrigation projects (42%) lack of good quality water (17%) and lack of rainfall (15%) for water resources; poor economic condition (48%), less availability (40%), high cost (40%), lack of knowledge and awareness (30%) and poor infrastructure (28%) for energy resources; and lack of improved breed (62%), lack of veterinary facilities (52%), poor marketing (18%) facilities and lack of good quality feed (12%) for animal husbandry.

### ***Suggestions for Effectiveness of Institutional Programme***

The farmers' suggestions for more effectiveness of on-going institutional programmes were recorded and are summarized in Table –3.

**Table 3:** *Suggestions to make institutions and programmes more effective*

<i>S.No.</i>	<i>Suggestions made</i>	<i>Number of respondents*</i>
1.	Provide more good veterinary facilities and improved breed	24
2.	Provide storage and marketing facilities	23

(\*=*Multiple Response*)

*Contd...*

<i>S.No.</i>	<i>Suggestions made</i>	<i>Number of respondents*</i>
3.	Provide cheap and improved quality inputs like seed, fertilizer etc.	20
4.	Transfer modern technology to farmer	16
5.	Provide awareness to farmers about watershed management	5
6.	Start water conservation projects	5
7.	Day to day contact with KVKs, extension workers Ag. Officer, etc.	2
8.	Provide credit to farmers	2
9.	Start artificial insemination programme at village level	2
10.	Provide irrigation facilities	2
11.	Change the traditional infrastructure and provide to technical knowledge about agriculture, animal husbandry and water conservation practices.	2
12.	Provide climatic information to farmers by extension workers, Ag. Officer, etc.	2

The major suggestions made by the farmers to make the institutional programmes more effective included provision of good veterinary facility and improved breed of animals, provision of storage and marketing facilities, supply of cost effective and quality inputs, effective transfer of technology, better awareness about watershed management and water conservation programmes.

### ***Constraints in Availing Information from Line Department***

The farmer's perception on the major constraints standing in the way to easy access for information from line departments was also recorded and is given in Table –4

**Table 4: Constraints in getting the information**

(\*=Multiple Response)

<i>S. No.</i>	<i>Constraints in getting information</i>	<i>Number of respondents*</i>
1.	Lack of illiteracy	27
2.	Lack of financial resources	20

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*Contd...*

<i>S. No.</i>	<i>Constraints in getting information</i>	<i>Number of respondents*</i>
3.	Lack of extension services	20
4.	Lack of awareness about new technology	20
5.	Lack of communication facilities	19
6.	Lack of knowledge about pest and disease management	5
7.	Poor infrastructure	4
8.	Improper power supply	4
9.	Lack of knowledge about climatic aspects	4
10.	Lack of weather forecasting facilities	3

The major constraints faced by the farmers in getting general information on agriculture and related areas included illiteracy (45%), financial resources (33%), lack of extension services (33%), lack of awareness about technology (33%) and lack of communication facilities (32%). Official's perception in existing delivery system, constraints and suggestion for improvement

The analysis of the opinion of field functionaries on input delivery and rural services is summarized below:

### ***Constraints in Delivery System***

The opinion of field functionaries on the constraints in delivery system is given in Table- 5.

***Table -5: Constraints in delivery system***

<i>S. No.</i>	<i>Sector/Constraints</i>	<i>Total respondents*</i>
<i>(*=Multiple Response)</i>		
<b>(A)</b>	<b>Agriculture</b>	
1.	Lack of awareness at village level	13
2.	Inadequate staff at village Panchayat- Samiti and district level	17
3.	Lack of information facilities at village Panchayat- Samiti level	2
4.	Unfavorable climate at village level	3
5.	Small holdings at village Panchayat- Samiti level	3

*Contd...*

<i>S. No.</i>	<i>Sector/Constraints</i>	<i>Total respondents*</i>
6.	Marketing problem at village Panchayat- Samiti level	10
7.	Non-availability of improved and cheap inputs at village Panchayat- Samiti level	6
8.	Lack of knowledge of staff about market and price at village district level.	3
9.	Lack of use of machinery, fertilizer, pesticides at village level.	2
<b>(B)</b>	<b>Water</b>	
1.	Lack of awareness at village Panchayat- Samiti level	8
2.	Inadequate number of water conservation project at village level.	5
3.	Erratic scanty monsoon at village Panchayat- Samiti and district level	7
4.	Inadequate water management at village Panchayat-Samiti and district level	4
5.	High depth of water table at village level.	2
6.	Insufficient budget at village level.	2
7.	Inadequate staff at village Panchayat- Samiti and district level	5
8.	Poor economic condition of farmers at Panchayat-Samiti level.	2
9.	No proper planning for use of water at village Panchayat- Samiti level	2
<b>(C)</b>	<b>Energy</b>	
1.	Poor economic condition of people at village Panchayat-Samiti and district level	14
2.	Not using non-conventional energy due to high cost at village level.	8
3.	Lack of awareness at village Panchayat-Samiti and district level	8
4.	Conventional energy sources are more powerful at village Panchayat-Samiti and district level	6
5.	Lack of availability of non-conventional energy at village district level.	4

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*Contd...*

<i>S. No.</i>	<i>Sector/Constraints</i>	<i>Total respondents*</i>
6.	Poor infrastructure at Panchayat-Samiti and district level	4
<b>(D) Animal Husbandry</b>		
1.	Lack of hospital and medicines at village and Panchayat-Samiti level	17
2.	Lack of awareness at village and district level	11
3.	Inadequate staff at village Panchayat-Samiti and district level	11
4.	Non-availability of improved breeds at village level	7
5.	Lack of artificial insemination facilities at village level	6
6.	Lack of marketing facilities for milk at village and district level.	2
7.	Poor economic condition of farmers Panchayat-Samiti and district level	2

The major constraints in the existing delivery system as reported by field functionaries included lack of awareness, inadequate staff, marketing problems and non-availability of inputs in agriculture; lack of awareness, inadequate number of water conservation projects and erratic and scanty rainfall and inadequate staff in water resources; poor economic condition, high cost and lack of accessibility of non-conventional sources of energy in energy; and lack of hospitals and medicine, lack of awareness, inadequate staff, non-availability of improved breeds and lack of artificial insemination facilities in livestock sector.

### ***Suggestion to Take Delivery System More Effective***

The suggestions made by the field staff in order to make the delivery system more effective are summarized in Table -6.

**Table 6:** *Suggestions to make delivery system more effective*

(\*=*Multiple Response*)

<i>S.No.</i>	<i>Suggestions</i>	<i>Total respondents *</i>
1.	Provide technical staff to improve awareness about marketing facilities prices and also animal husbandry at village level	17

*Contd...*

<i>S.No.</i>	<i>Suggestions</i>	<i>Total respondents *</i>
2.	Sufficient provision of budget at village and Panchayat- Samiti level	6
3.	Access to multimedia for increased awareness in new generation at village Panchayat- Samiti and district level	6
4.	Conduct field demonstrations and field visits at village level	3
5.	Provide weekly or monthly training for farmers at village level	3
6.	Provide marketing facilities at village level	2
7.	Provide more facilities at village level	2
8.	Provide technical implements at village level	2
9.	Fill vacant posts in agriculture, animal husbandry and agriculture marketing at village Panchayat- Samiti and district level .	5
10.	Awareness and training programmes must be formulated and executed for better results at district level	4

The major suggestions made by the field functionaries in order to make the delivery system more effective included (i) provision of more technical staff to improve awareness about marketing facilities, price and animal husbandry, (ii) enhanced provision of budget, (iii) easy access to multi-media and I.T. areas by field staff, filling up of vacant positions in line departments, conduct of more field demonstration and field visits and regular training programmes for farmers.

### ***Constraints in Getting Information***

The constraints faced by the field functionaries in getting information are listed in Table -7.

***Table 7: Constraints in getting the information***

*(\* Multiple Response)*

<i>S.No.</i>	<i>Constraints in getting information</i>	<i>Total respondents *</i>
1.	Illiteracy of the farmers at village level	6
2.	Lack of awareness at village level	5

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*Contd...*

<i>S.No.</i>	<i>Constraints in getting information</i>	<i>Total respondents *</i>
3.	Unavailability of information channels like TV, Radio, telephone, internet, etc. at village and Panchayat- Samiti level	6
4.	Poor economic condition of people at village level	3
5.	Lack of timely availability of information at village level at village and Panchayat- Samiti level	3
6.	Inadequate staff to provide service at village and Panchayat- Samiti level	3
7.	Unavailability of modern information technology at village and district level.	4

The constraints in getting information related to agriculture and allied areas included illiteracy of farmers, unavailability of information sources like T.V., radio, telephone, internet, etc. lack of awareness, unavailability of modern information technology sources, poor economic condition, lack of timely availability of information and inadequacy of staff.

### **Summary and Conclusions**

The present study indicated that there have been changes in the climate over the years in this district affecting, among others, agriculture, water and energy. Thus, the district is very much prone to vulnerability arising out of variations in climate from time to time. The analysis of delivery systems did bring out the extent of adequacy of the systems and services and the constraints as well. There is a need for measures to optimize the existing systems as also building up of alternate institutional mechanisms, which are more accessible and affordable. Though the farming community has been making its own efforts to adapt to the changing scenario, there is a need for interventions to help them cope up with the situation. In this context, the importance of integrated approach with systems perspective can hardly be over emphasized. The study report stated that to secure the livelihoods of rural poor and vulnerable communities by building and enhancing their adaptive capacity to better cope with adverse impacts of climate change and improve disaster preparedness.

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# International Regulatory Framework of Foreign Investment

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## Abstract

This paper provides an overview of the regulatory systems related to investment environment. The scope of this paper is to lay down the existing rules related to foreign direct investment across the countries. The current fragmented international investment regime shows the degree of complexity and confusion of the system, with very many contracting parties, some bilateral, others regional or even multilateral, as we have seen in the case of WTO Agreements. This encourages regulatory competition among the various models of international investment agreements.

A comprehensive multilateral framework for investment would serve as a template for a new generation of bilateral and regional investment treaties. It would help to reduce transaction costs and enhance the economic benefits of FDI. Regarding the design of such a multilateral framework for investment, the WTO has the opportunity to encapsulate years of development of an international framework for investment in the first truly multilateral agreement for investment. Such an agreement in the WTO context would not replace current bilateral and regional investment regulatory regimes, but could clarify the relationship among the GATS, the TRIMs Agreement, and BITs.

**Keyword:** FDI, WTO, International Policy, Bilateral Investment Treaties, Multilateralism.

**JEL Classification:** F21, F38.

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## **1. Introduction**

Globalization has been leading towards cross-border flows of foreign direct investment (FDI) in which businesses in one country own part or all of businesses in other countries. Indeed, FDI flows have grown at much faster rates than has the flow of goods and services. The last twenty-five years have seen the gradual liberalization of foreign investment regimes. Europe, the United States, and other industrialized countries have all taken major steps to encourage FDI in the 1990s, opening up certain sectors that were previously highly restricted, including telecommunications. This was as a result of the Uruguay Round and associated trade agreements. Liberalization has been particularly pronounced in developing countries, which have recently become important sources and destinations for FDI. China, India, Brazil, Russia, and dozens of smaller developing countries have also made substantial strides in opening up their economies to FDI. As a result, even with the natural ups and downs associated with global growth cycles, FDI has grown dramatically in the past generation. FDI policy and regulation plays very significant roles in promotion and growth of FDI over last two decades.

The FDI regulation panorama is very diverse and multilayered. The failed attempts to establish multilateral rules for investment, such as the Multilateral Agreement on Investment in 1998 and the Cancun WTO Ministerial Conference of 2003, seem to have triggered the new trend of bilateral and regional promotion and protection of FDI. The proliferation of investor-state arbitrations is evidence of the fact that, for the time being, bilateral and regional governance of investment via Bilateral Investment Treaties (BITs) and investment chapters of free-trade agreements (FTAs) will be the prevailing means of governing FDI. Yet, so much investor-state arbitration is causing issues of conflicting arbitral awards and forum shopping. Hence, there is the importance of coordination at the multilateral level towards the creation of a multilateral investment treaty.

## **2. Literature Review**

Eric Neumayer and Laura Spess (2005): Foreign investors are often skeptical toward the quality of the domestic institutions and the enforceability of the law in developing countries. Bilateral investment treaties (BITs) guarantee certain standards of treatment that can be enforced via binding investor-to-state dispute settlement outside the domestic juridical system. Developing countries accept restrictions on

their sovereignty in the hope that the protection from political and other risks leads to an increase in foreign direct investment (FDI), which is also the stated purpose of BITs. The paper evidences that a higher number of BITs raises the FDI that flows to a developing country.

Ryan J. Bubb and Susan Rose-Ackerman (2007): Bilateral investment treaties (BITs) provide international standards for the protection of foreign investment. The optimal strategy for newly independent states may have been to reap a windfall gain by a temporary period of expropriation and then to use BITs to commit to respecting property rights to new foreign investments. The multilateral agreement on investment (MAI) is now unlikely because the widespread coverage of BITs has narrowed the achievable surplus of an MAI.

Büthe, T. and Milner, H. V. (2008): The flow of foreign direct investment into developing countries varies greatly across countries and over time. The international trade agreements—GATT/WTO and preferential trade agreements (PTAs)—provide mechanisms for making commitments to foreign investors about the treatment of their assets, thus reassuring investors and increasing investment. Developing countries that belong to the WTO and participate in more PTAs experience greater FDI inflows than otherwise, controlling for many factors including domestic policy preferences and taking into account possible endogeneity. Joining international trade agreements allows developing countries to attract more FDI and thus increase economic

Rodolphe Desbordes and Vincent Vicard (2009): This paper investigates the effect of the implementation of bilateral investment treaties (BITs) on the bilateral stocks of foreign direct investment (FDI). The paper shows that the effect of the entry into force of a BIT crucially depends on the quality of political relations between the signatory countries; it increases FDI more between countries with tense relationships than between friendly countries. This paper also finds evidence that BITs and good domestic institutions are complementary. BITs should therefore be understood as a mechanism for host governments to credibly commit not to expropriate investors in the future.

Leal-Arcas, R. (2009): This article explores whether a multilateral investment treaty is necessary and possible in the framework of foreign direct investment (FDI) law or whether the current multifaceted and multilayered system of bilateral and regional investment agreements should be retained. The paper concludes that the World Trade Organization (WTO) has the opportunity here to incorporate years of

experience of bilateral and regional investment agreements and develop a multilateral agreement for investment. Such an agreement in the WTO context would not replace current investment regulatory regimes, but could clarify the relationship among the General Agreement on Trade in Services, the Agreement on Trade-Related Investment Measures, and bilateral investment treaties.

### **3. Regulatory Framework of International Investment Environment**

This paper provides an overview of the regulatory systems related to international investment. The scope of this paper is to lay down the existing regulatory framework for international investment. There are following three broad layers of FDI regulation:

- Bilateral Investment Treaties (BITs)
- Regional Approaches to Investment Regulation
- Multilateral Approaches to Investment Regulation

#### **4.0 Bilateralism**

Bilateral investment treaties have been designed and developed for investment having twin main purpose: the protection and the promotion of investment. BITs structure consist of following distinguish features.

##### ***4.1 Admission of Investments***

A foreign investment must comply with domestic laws of host country. The most of BITs has considered and incorporated laws of host countries in treaties. Under BITs, Parties are focusing to encourage, promote and create favorable conditions for foreign investments, subject to home and host countries legislation.

##### ***4.2 Standard of Treatment of Investments***

The treatment of an investment consists of the obligation of admission, the facilitation of the transfer of their proceeds, and the agreement on a reasonable mode of settlement of disputes. The treaties contain “fair and equitable treatment clause”.

##### ***4.3 Transfer***

The transfer of the proceeds is the most important for foreign investors. Thus BITs provide for transfers without delay. However, some BITs recognize problems of many developing countries for allowing the immediate transfer of large sums of money. Thus, they provide for the transfer of such sums in installments. In such case, BITs provide for payments of interests for delay. The exchange rate is

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also important element with reference to the official and the market rate of exchange and the IMF exchange regulations.

### ***4.4 Expropriation***

The expropriation has to take into accounts three issues such as conditions, measures of compensation, and transfer of compensation.

- Public interest is a condition precedent for any measure of expropriation of the BITs. The BITs also require being non-discriminatory in nature and not in breach of any commitment.
- The measure of compensation may be expressed in different forms. These forms may be as prompt, adequate, and effective or just, full, reasonable, or fair and equitable compensation. The value of the investment may be either at the date of expropriation or at the real or market value.
- The transfer of compensation should be realized without delay. In case of delay, the interest should be paid at the normal commercial rate or agreed rate. Other matters of the transfer of compensation are governed by provision of the transfer of the proceeds of the investment.

### ***4.5 Settlement of Disputes***

The BITs contain provision of an arbitration clause for settlement of dispute between home country, host country and investors. There are following institutions for this, namely International Centre for Settlement of Investment Disputes (ICSID); United Nations Commission on International Trade Law (UNCITRAL) and International Court of Justice (ICJ)

#### ***International Centre for Settlement of Investment Disputes***

The International Centre for Settlement of Investment Disputes (ICSID) is an institution of the World Bank group was founded in 1966. The ICSID provides a legal and organizational framework for the settlement of disputes between home country, host country and investors. The ICSID allows resolution of investment disputes through arbitration without interference from domestic political or judicial organs.

Arbitration under the ICSID is subject to four conditions:

1. The parties must have agreed to submit their dispute to dispute settlement under the ICSID;
2. The dispute must be between contracting countries to the ICSID;
3. The dispute must be a legal dispute; and

4. The dispute must arise directly out of an investment made in the host Contracting State.

### ***United Nations Commission on International Trade Law Arbitration Rules***

The United Nations Commission on International Trade Law (UNCITRAL) is a body of the United Nations. Agreements which include the UNCITRAL Arbitration Rules may be bound to this form of dispute resolution. Arbitration under UNCITRAL Rules may be an option under a regional regime for investment. Alternatively, provisions may be made for a dispute to be referred to an ad hoc tribunal operating under UNCITRAL rules.

### ***International Court of Justice***

The role of the International Court of Justice (ICJ) in the field of investment disputes has been limited. There are three following cases related to claims of expropriation of foreign investment before the ICJ- Anglo- Iranian case, Barcelona Traction case, and Elettronica Sicula S.p.A (ELSI) case.

Following important points have been drawn from these cases for future BIT treaties:

1. Treaties should be drafted as to entitle foreign investors to make claims with respect to acts suffered by a domestic company substantially owned by the investors;
2. The standards concerning expropriation should be given a broader view.
3. The translation of agreements and the meaning of words in the different languages concerned have to be taken into consideration by countries.
4. The interpretation of treaties is a very broad and widely commented issue. The lesson to be learned from the *ELSI* case is that general words do not seem to be good enough; they must be, therefore, supplemented by more specific ones, making it impossible to deny investment protection where it was indeed intended.

In 2001, many bilateral investment treaties (BITs) were evolved. The total number of treaties rose to 2,099 in 2009 from 1,941 in 2008. The number of BITs signed among developing countries has also significantly increased. Since BITs are different from each other, however they help to find common denominators for designing of a multilateral framework for investment.

### 5.0 Regionalism

Regionalism may be an alternative to bilateralism and short of multilateralism. There are attempts at the regional level at building a more institutionalized framework for investment for example, European Union (EU) and NAFTA. We will look at the enforcement of Article XXIV of the GATT at the regional level. We will focus on two regional blocs: the EU and the NAFTA.

#### 5.1 *The European Union*

European rules applicable to investment are the combination of two different series of provisions: Article 56 EC, regarding the freedom of capital movement, and Article 43 EC, regarding the freedom of establishment. The European Commission issued a communication on the intra-EU investment aimed at interpreting the two above-mentioned Articles.

***Freedom of Capital Movement:*** One of the four fundamental freedoms in the EU – freedom of capital movement – has been introduced by the Treaty of Rome and then transformed by the Treaty of Maastricht. Under treaty of Rome, Exchange controls restrict transactions such as capital flows and repatriation of the proceeds of investment, depending on the policy goal. Countries use exchange and investment controls apply monetary policies, thereby preventing or restricting certain types of capital movements.

The free movement of capital was significantly transformed by the Maastricht Treaty. The Treaty of Maastricht completely revised the provisions on free movement of capital since 1994. The capital movements became fully liberalized within the European Community in 1990. The free movement of capital principles was inserted in the EC Treaty in 1993. The current provisions included in the EC Treaty are Articles 56 to 60 EC. These provisions end the limited freedom of capital movement under the Treaty of Rome.

However, there were some restrictions on free capital movement between member States and third countries. Article 57 (2) EC requires the Council to endeavor to achieve free movement of capital with third countries “to the greatest extent possible.” The EU Council is also empowered to take safeguarding measures in exceptional circumstances when capital movements to and from non-member states may threaten to cause serious difficulties for the operations of the economic and monetary union.

***Freedom of Establishment:*** The provisions related to the freedom of establishment are the Articles 43 to 48 EC. These provisions are

regulating: natural persons (workers, students, retired persons) and legal persons (companies, branches, subsidiaries, agencies). We will focus on the second category.

Article 43 EC prohibits any kinds of “restrictions on the freedom of establishment of nationals of a Member State in the territory of another Member State.” Establishment includes companies, subsidiary, branch or agency.

Article 48 EC provides that the “companies or firms formed in accordance with the law of a Member State and having their registered office, central administration or principal place of business within the Community shall, for the purposes of this Chapter, be treated in the same way as natural persons who are nationals of Member States.” However, this treatment is not strictly possible, given the many differences between natural and legal persons.

Foreign investment in international agreements where the EC is a party acknowledging the importance of foreign investment regulation, and the European Community (EC) has incorporated foreign investment agreements that it has concluded with third countries. The EC Treaty does not offer a specific legal basis enabling the EC to take external action in the field of foreign investment. However, the EC Treaty includes a number of provisions that enable the EC to take action and conclude international agreements with third countries in the field of foreign investment. As mentioned above, the EC Treaty makes an explicit reference to foreign investment in Article 56 EC on capital movements, while a number of provisions touch upon specific aspects of foreign investment regulation.

Foreign investment provisions are incorporated in agreements that have divergent objectives and aim at different levels of political, economic, and social integration. The external policy of EC with regard to developing countries is making emphasis on their development and integration in the world economy. This is reflected through Economic and Partnership Agreement between the EC and 13 CARIFORUM countries places emphasis on the development aspects of foreign investment regulation.

The features of the Treaty provisions include:

- The non-discrimination principle;
- No apparent direct effect;
- A false impression of equal treatment for EU Member States’ nationals and

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- Third countries' nationals, when in fact there are many exceptions to the initial liberalization principle;
- The aim is more about regulating than liberalizing;
- No reference to international or customary law.

The EC investment provisions and regionalism with respect to international investment such as the Economic and Partnership Agreement between the EC and 13 CARIFORUM countries, is a systematic, complete, and balanced international foreign investment regulation. These regulations take into consideration the interests of foreign investors, home and host states, and establish a balance between divergent interests. Such an agreement creates a favorable regulatory environment by liberalizing entry of foreign investment and including commitments concerning investment promotion. This effort is complemented by a network of provisions which guarantees the sustainable-development orientation and effectiveness of foreign investment provisions, aiming at ensuring the maximization of benefits from foreign investment. However, the unwillingness of the EU to include private investor or home state obligations concerning their adherence to sustainable development objectives weakens the effective implementation of development policies and questions the overall development orientation of the Economic and Partnership Agreement between the EC and 13 CARIFORUM countries.

### ***5.2 North American Free Trade Agreement***

The North American Free Trade Agreement (NAFTA) was an experiment towards deregulation of trade and investment among the U.S, Mexico, and Canada. NAFTA Chapter 11 organizes a very experimental and complete regime for investments. It is the first regional agreement to have a specific chapter on investment. One of the most important innovations of such a regime is the investor-State disputes, which gives the right to investors to directly defend their rights in front of a State that may have violated these rights. This situation is different from the past, where investors had to rely exclusively on the diplomatic protection of their own State.

The main characteristics of the NAFTA regime under Chapter 11 for investment are:

1. The most-favored-nation principle;
2. The national treatment principle;
3. The minimum standard regime (Article 1105);
4. More rules than exceptions: the aim is to liberalize not to regulate;

5. Direct access of private parties to the settlement of disputes system; and
6. Application to all investments, including those of third countries to the provisions of Articles 1106 (performance requirements) and 1109 (environmental measures).

Chapter 11 is divided into two sections: investment (Section A) and dispute settlement (Section B).

**Investment:** Section A of Chapter 11 covers the measures adopted by a Party (i.e., any level of the government) that affect investors of another Party; investment of investors of another Party; and for purposes of the provisions on performance requirements and environmental measures, all investments in the territory of the Party.

Article 1101 of the NAFTA also recognizes the right of a Party to perform functions (law enforcement) and to provide services (social welfare and health). Some exceptions concerning Mexico are also stated. There are two different types of measures are found: liberalizing measures (Articles 1102 to 1104 and 1106) and protecting measures (Articles 1105 and 1110).

Investment liberalization measures – Articles 1102 to 1104 and 1106 of the NAFTA: Article 1102 sets out the obligation of national treatment for investors and their investments with respect to establishment, expansion, management, conduct, operation, and sale or other disposal. National treatment means that a Party will treat investors of other Parties and their investments as favorably as it treats its own investments, in like circumstances. It actually means the best treatment provided by a government to any investor or investment, both in the pre- and post-establishment phases. In Article 1103, the second most important principle of the NAFTA – the most-favored nation (MFN) principle – is to be found. Article 1104 requires the better of the treatment between national treatment and the most-favored-nation treatment. Article 1106 prohibits the imposition and enforcement of a certain number of specified performance requirements and the use of specified performance requirements as conditions attached, including preference for domestic sourcing of goods and restricting domestic sales by tying such sales to export performances.<sup>148</sup> Permitted measures include the necessity to protect human, animal, and plant life or health.

Investment Protection Measures – Articles 1105 and 1110 of the NAFTA: Investment protection measures are highly important as they reduce any sort of risk in investment. Article 1105 is one of the most original creations of the NAFTA Chapter 11. It provides for treatment

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in accordance with international law, aiming at settling a minimum standard of treatment for investments of NAFTA investors. The treatment is based on longstanding principles of customary international law. Article 1110 provides that no party may expropriate investments of investors of another Party, except for a public purpose on a non-discriminatory basis, in accordance with due process of law, and on payment of compensation.

***Settlement of Disputes:*** Section B of Chapter 11 sets out the dispute settlement procedures necessary to resolve complaints between investors and NAFTA party governments, and attempts to establish a mechanism for the settlement of investment disputes that assures equal treatment with the principle of international reciprocity and due process before an impartial tribunal. Even though the NAFTA system is mainly based on a State-to-State settlement of disputes system, Chapter 11 has the particularity of introducing an investor-State system: an investor from a NAFTA State may commence arbitral proceeding for breach of any of the provisions in section A of Chapter 11.

As Kreklewetz (2007) argues, it is important to recognize that not everyone may bring a claim for dispute settlement, and that the Chapter 11 mechanism is effectively limited to investors of a Party to NAFTA, and more specifically, a national or corporation of a NAFTA Party that “seeks to make, is making or has made an investment,” in another NAFTA country. Also important to note is that, generally speaking, investors may not bring NAFTA claims against their own governments for harm to investments made in their own country.

The initial process is governed by Article 1116(2), which requires that claims must be brought within three years of when the investor “first acquired, or should have first acquired, knowledge of the alleged breach and knowledge that the investor has incurred loss or damage.” One should also note that Article 1118 indicates that parties “should” first attempt to settle a claim through consultation or negotiation, and that should this consultation or negotiation process fail, then the disputing investor is required to file a notice of intention to submit a claim to arbitration at least 90 days before the claim is submitted, provided that six months have elapsed since the event giving rise to the claim.

There is therefore first an intention to solve disputes through consultation or negotiation. If this consultation does not solve the problem, then the investor may begin an arbitration procedure under any of the following sets of rules: (1) International Center for the

Settlement of Investment Disputes Convention (ICSID); (2) Additional Facility Rules of ICSID; (3) United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules. Note that Article 1130 requires that (unless the disputing parties agree otherwise) the arbitration occur in the territory of a Party that is a party to the 1958 New York Convention, selected in accordance with the rules of the arbitration forum. The dispute shall be decided in accordance with NAFTA provisions and any applicable rules of international law. The final award is binding only on the disputing parties and with respect to the particular case.

To sum up on the NAFTA investment provisions and regionalism, Graham and Wilkie (1998) have argued that “The investment provisions of the NAFTA have instituted the most comprehensive rules on investment to date for multinational corporations and nation states. These provisions represent a further step towards a new *lex mercatoria* and international legal standing those nation-states and increasingly globalized firms are seeking. More broadly, the NAFTA investment provisions have further endorsed a rules based international system in which the complementarity of trade and investment issues is implicitly recognized.”

In conclusion, knowledge gained from the use of regional agreements will benefit the establishment of a multilateral framework for investment for two reasons. First, there is a real need for multilateral rules in the FDI field. This, however, does not suggest the replacement of the current regional investment regime nor that the existing regional regimes are inadequate. Second, there is a difficulty in designing coordinated rules between the NAFTA and the EU. The approaches to investment of the NAFTA and of the EU are completely different. Interestingly enough, the aim of these two approaches is the same, i.e., the protection and liberalization of investments. Nevertheless, the mechanisms developed are very different and, for a possible multilateral investment agreement, it is important to see how these two conceptions could converge.

The NAFTA approach to investment is based on international law principles and aims both at the liberalization and protection of investments. NAFTA Chapter 11, which creates a very complex regime for investment, elaborates it on the basis of the main principles of international law. This dual approach (liberalization and protection) is also observed in the BITs signed by the United States. The deciding issues of the NAFTA for a potential multilateral framework for

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investment are its top-down approach, the fact that it possesses an anti-expropriation protection which is both too strong and ambiguous, a very broad definition of foreign investment, as well as the absence of investment incentives regulation. The European Union regime, on the other hand, is not only more basic, but also focuses essentially on the protection of investment. It is organized around the principles of free movement of capital and freedom of establishment. After the failure of the MAI, the EU prefers a bottom-up, positive list approach to treat the establishment of FDI.

### **6. Multilateralism**

The ideal situation for foreign investment is multilateralism which leads towards efficient utilization of global resources and global welfare. Multilateralism refers to the process of transferring an issue from the unilateral action of the host country to the multilateral field. It also implies the international responsibility of the country. Multilateral framework for investment (MFI) is a very broad and complicated one. Developed countries mainly the countries of the European Union (EU) and the United States, are supporting the initiative of an MFI and Developing countries are reticent to MFI. WTO has been consistently striving for setting up a standard for MFI. However, there is now no standard of MFI for investment at the multilateral level.

There have been various attempts to liberalize and regulate investment, but they have either failed or been developed only at a bilateral or regional level. In this sense, it is pertinent to bear in mind the failure of the multilateral agreement on investment (MAI) in 1998 in the OECD framework leads bad experience on the Parties to this Agreement. Developing countries find difficult to move on for MFI because of their own limitations. TRIMs Agreement under WTO and the Energy Charter Treaty are examples of moving toward a multilateral framework for investment.

#### ***6.1 TRIMs Agreement***

The WTO's Agreement on Trade-Related Investment Measures (TRIMs) sets certain rules relating to foreign direct investment. TRIMs indicate an investment related measure that has an impact on international trade. The TRIMs rules forbid countries from maintaining performance requirements on investors. These are governmental policies regulating investment, for instance, requiring local content. The TRIMs does not contain the expansive definition of investment or the extensive new investor right which exist in the NAFTA and were

proposed for global application through the Multilateral Agreement on Investment. However, expanding the scope of the WTO's investment rules and the nature of investor rights granted by the WTO were part of the push by the EU to launch new negotiations at the Cancun WTO Ministerial Conference on the so-called new issues (also referred to as the Singapore issues).

The Agreement requires mandatory notification of all non-conforming TRIMs and their elimination within two years for developed countries, within five years for developing countries and within seven years for least-developed countries. It establishes a Committee on TRIMs which will, among other things, monitor the implementation of these commitments. The agreement also provides for consideration, at a later date, of whether it should be complemented with provisions on investment and competition policy more broadly.

There are a few problems with the TRIMs Agreement that make it a problematic model for a multilateral investment framework.

1. The TRIMs Agreement does not govern different investment laws, but only designs regulations on trade in goods. The Agreement recognizes that certain investment measures restrict and distort trade. It provides that no contracting party shall apply any TRIM inconsistent with GATT Articles III (national treatment) and XI (prohibition of quantitative restrictions). To this end, an illustrative (i.e., non-exhaustive) list of TRIMs agreed to be inconsistent with these articles is appended to the agreement. The list includes measures which require particular levels of local procurement by an enterprise or which restrict the volume or value of imports such an enterprise can purchase or use to an amount related to the level of products it exports.
2. There is no generic definition of a TRIM, and that a temporary deviation for balance of payments purposes is allowed for developing countries.
3. The illustrative list of TRIMs is inconsistent with the obligations of national treatment. And fourth, the TRIMs Agreement does not apply to services and is a compromise between developed and less-developed countries.

Dispute resolution under the TRIMs Agreement has revealed that WTO Members may not apply investment measures that are inconsistent with the principle of national treatment (GATT Article III) or otherwise violate the general prohibition of quantitative restrictions on imports and exports (GATT Article XI).

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### ***6.2 Energy Charter Treaty***

The Energy Charter Treaty (ECT) provides a multilateral framework for energy cooperation that is unique under international law. It is designed to promote energy security through the operation of more open and competitive energy markets, while respecting the principles of sustainable development and sovereignty over energy resources. Thus, Energy Charter Treaty is the only binding multilateral legal instrument dealing with intergovernmental cooperation in the energy sector.

### **7.0 Conclusion**

The current fragmented international investment regime shows the degree of complexity and confusion of the system, with very many contracting parties, some bilateral, others regional or even multilateral, as we have seen in the case of WTO Agreements. This fragmented regime may encourage regulatory competition among the various models of international investment agreements. This fragmentation of the international investment regime may also create an incentive for treaty shopping by those foreign investors who seek protection even in situations where their country has not concluded or ratified investment agreements that offer the same level of protection as those achieved in other countries.

Moreover, as mentioned above, the proliferation of investor-state arbitrations is evidence of the fact that, for the time being, bilateral and regional governance of investment via BITs and investment chapters of FTAs will be the prevailing means of governing FDI. That said, so much investor-state arbitration is causing issues of conflicting arbitral awards and forum shopping. All of this would be solved with the creation of a stable, non-discriminatory multilateral investment treaty. Hence it is desirable to create a multilateral investment treaty.

Furthermore, as analyzed above, environmental and labour standards – which until now have only been treated marginally in international investment agreements – are increasingly seen as inseparable from foreign investment and therefore, from a substantive point of view, it is key to ensure that they are incorporated in a future multilateral framework for investment. This will be even more justified as globalization continues to be a reality that affects the social and environmental responsibility of foreign investors.

A comprehensive multilateral framework for investment would serve as a template for a new generation of bilateral and regional investment

treaties. It would help to reduce transaction costs and enhance the economic benefits of FDI. Regarding the design of such a multilateral framework for investment, the WTO has the opportunity to encapsulate years of development of an international framework for investment in the first truly multilateral agreement for investment. Such an agreement in the WTO context would not replace current bilateral and regional investment regulatory regimes, but could clarify the relationship among the GATS, the TRIMs Agreement, and BITs. Although the success of this project remains an unknown, much work has already been inherited via the BITs, the GATS, the NAFTA, the Energy Charter Treaty, the TRIMs Agreement, and the failed MAI. The WTO has the chance to build upon these experiences. One of main failing of MAI is that unlike the BITs, it does not address the basic issues of admission, standard of treatment, transfer etc.

Since there is no consistent MAI that is applicable globally, it is not possible to explain an international FDI patterns with the help of the policy framework except the most general principles of WTO- MFN, National Treatment and level playing field. On the other hand, the lack of such a common framework may be the reason (to some extent) that gives us somewhat inconsistent results that vary across country groupings (developed vs. developing), and other countries and in terms of inward and outward FDI.

This paper provides an overview of the regulatory systems related to investment. This overview is laid down the existing rules related to international investment environment. This paper presents the layers of FDI regulation which includes bilateral investment treaties, regional approaches to investment regulation and multilateral approaches to investment regulation.

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# Impact of ICT on Women Empowerment in India

Kadari Rajeshwar

## Abstract

Information and Communication Technologies (ICTs) are a diverse set of technological tools and resources which in a way used to create, disseminate, store, bring value-addition and manage information. It also provides information and solution for a broad based development in social, economical and political life of the people. The ICT sector consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware, software and services and electronic media, i.e, internet and electronic mails.

Thus, ICT has emerged as a powerful tool for measuring and dissemination of information, especially in relation to gender and its related concomitants. It is evident that there has been a rapid growth in the ICT sector since the late 1980s and the ICT usage has dramatically expanded since the 1990s. According to the World Bank, teledensity in India had reached 3.8% of the population by 2001. The number of internet accounts is growing at a rate of 50% per annum. The ITES-BPO sector alone grew at 59% and employment had reached 106,000 by 2004 [NASSCOM 2004]. According to the 2004 report by the Cisco Learning Institute, women comprise only 23% of India's internet users. This gender digital divide in India is characterized by low levels of access to technologies and its related materials. Poverty, lack of computer literacy and language barriers are among the factors impeding access to ICT infrastructure, especially in developing countries.

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This paper explores the role of ICT-enabled networking processes for Women's empowerment. Further, the paper also addresses social, cultural, economic and other factors that challenge women's access and use of communication technologies.

**Keywords:** ICT, Women empowerment, Government, NGOs, and India

### Introduction

In order to bridge the gap between rich and the poor or rural and urban areas, ICTs are very useful. Thus, ICT stems mainly from the fact that rural areas often lag behind urban areas in terms of essential infrastructure and services such as transportation, health, education, electricity and government services.

This creates a politically and ethically unacceptable inequality of services and opportunities for rural populations and prevents them from participating appropriately and fully in socioeconomic and political life of the nation. Rural isolation and deprivation can negatively impact growth and certainly growth cannot be sustainable unless it is inclusive. This is especially true of a nation like India, where more than 70% of the population resides in rural areas and is largely engaged in low productivity sectors like agriculture and its allied activities. Thus, ICTs can overcome many infrastructural constraints.

Women empowerment through ICT is merely associated with socioeconomic development (Women 2000 and beyond). This potential towards social transformation demands that everyone should have access to ICT. Prevailing inequalities in access to ICTs throughout the world suggest that many groups are hindered by their social, economic, political and cultural circumstances from developing a relationship with ICT.

With regard to women this inequality is referred as the "gender digital divide" which postulates that women all over the world have very much less access to the ICT than their male counterparts. It aims to fill the gap by addressing ICT which can promote sustainable socioeconomic development and help women to overcome the gap.. Women across the world experience multiple challenges in access to and use of ICTs. Most of these challenges are a result of social processes that marginalize women to access technology, and thus invariably affect progress.

**Information and communication technologies (ICT)**

ICT can be interpreted broadly as “technologies that facilitate communication and the processing and transmission of information by electronic means.” ICT promises a fundamental change in all aspects of our lives, including knowledge dissemination, social interaction, economic and business practices, political engagement, media, education, health, leisure and entertainment.

Governments, both at the Centre and States, have given emphasis to bridge the gap and hence introduced many schemes and programmes in the rural areas of India. In India ICT applications such as Warana, Dristee, Sari, Sks, E-Chaupal, Cybermohalla, Bhoomi, E-Mitra, Deesha, Star, Setu, Friends, E-Seva, Lokmitra, E-Post, Gramdoot, Dyandoot, Tarahaat, Dhan, Akshaya, Honeybee, Praja are in functioning for rural development. Through ICTs people in rural areas can connect with the local, regional and national economy and access markets, banking/financial services and employment opportunities. ICTs can act as a channel of delivery of e-Government services including health and education. Thus bridging the digital divide also bridges the overall infrastructural gap and addresses other constraints faced by rural areas. If ICTs is appropriately deployed and realize the differential needs of urban and rural people, they can become powerful tools of economic, social and political empowerment.

**Women Empowerment**

Empowerment of women in the context of knowledge societies entails building up the abilities and skills of women to gain insight into the issues affecting them and also to build their capacity to voice their concerns and issues in the larger forums of the society they live. It also entails to develop the capacities of women to overcome social and institutional barriers and thus strengthen their participation in the economic and political processes which led to improve their quality of life.

For instance, Women’s Network of the Association for Progressive Communications [APC] has conducted training workshops to support electronic networking among women’s groups. The Multimedia Caravan project in Senegal provided rural women with the opportunity to develop their own ideas on how ICT can be used to meet their development needs and goals in order to implement them successfully.

### **ICT Applications for Women Empowerment**

With the advent of various organizations, Government, Non-government Organisations (NGOs) and private institutions, a lot of ICT applications were developed to bring out social, economic and political changes in the lives of the rural women across the states in India. All these organizations, government, NGO's, and other private institutions, tried their best to implement different schemes and programmes which have led to improvement of the status of women through ICTs in rural areas of the country.

#### **Government Initiatives**

In order to enhance the skills of rural women, governments, both at the centre and in different states, have initiated few ICT knowledge tools. For instance, Yeshaswini Nagara Hagu Grameena Abhivruddi Parishat in association with Karnataka State Women's Development Corporation (KSWDC) have launched e-mahile project to women's drawn from over 200 villages in 11 districts of the Karnataka state. Later, each trained woman who is called village service provider, has been given a laptop, printer, Uninterrupted Power Supply (UPS), soil testing kit, LCD projector, digital camera, e-mahile dual language software and educational CDs, Internet connection, IRTC currency for booking rail and air tickets at a cost of Rs. 1,80,000. Nationalized banks support these women by providing loans. Apart from loans, the government also give Rs. 10,000 as subsidy to each woman under the Asare programme. This is besides the Rs. 25,000 margin money. Personality development courses and Yoga classes are the added benefits. Many women with their newborns used to attend the training camps and the organizers have set up a creche and also appointed a maid to take care of these children.

#### **NGO's Initiatives**

In order to build the capacities of rural women, government initiatives alone does not yield the desired results due to its diversity in nature of India and to achieve total coverage of all the people in the country, certain NGOs also encouraged to start their activities in some of the pockets of India. Thus, Smile (Savitri Marketing Institution for Ladies Empowerment) organizes IT seminars in collaboration with IT companies. NIIT has launched SWIFT JYOTI programme for IT

education of women. The programme is designed to provide computer literacy to females from six years to sixty years. It also provides functional literacy on the one hand and benefits women in seeking and receiving information useful in their daily life.

The duration of the SWIFT JYOTI programme is 18 hours. SEWA (Self Employed Women's Association) has launched IT programme to increase efficiency of rural micro enterprises. Ujjas Innovation: It is an initiative to empower women by bringing out their own newsletter called "Ujjas". The newsletter went on air on All India Radio Bhuj Station in Gujarat. The newsletter provides a medium to express views against female infanticide, dowry, and other relevant issues.

### **Presence of Private Sector**

In addition to both government and NGO's initiatives, of late, private sector also playing its role to enhance the ICT networks base in the selected pockets of rural and semi-urban areas of India. For instance, Project Shakti launched by Hindustan Unilever promotes internet dissemination among rural women.

The project now provides services to 135000 villages, across 15 states and has developed 45000 women entrepreneurs. Project Shiksha of Microsoft and Internet Bus on Google is also contributing to increasing internet awareness. E-choupal initiative of ITC has reached 40,000 villages covering 4 million farmers through 6500 kiosks. NASSCOM: National Association of Software and Service Companies provide mentoring and empowering women managers across junior, middle and senior level of the IT Industry through various workshops, activities and training sessions. India Shop, an e-commerce website in Tamil Nadu, has been designed to sell rural women's cooperatives. Swayam Krishi Sangam (SKS) is using ICT's such as smart cards and handheld devices to improve microfinance projects to empower poor women in the areas.

There are number of projects spread across India and elsewhere to cater the needs of the women and thus to develop and enhance their capacities in order to provide basic knowledge on ICTs and its applicability to women and their empowerment. In the following section, an attempt is made to showcase certain projects, Best Practices, which are working for the betterment of women in the society.

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*Table: Schemes for Women Empowerment Using ICT*

S.No.	Name of the Department	Name of the Scheme	Purpose of the Scheme
1	Smile NGO	Swift Jyoti	IT education of women
2	MHRD	Central scheme to provide Internet Subsidy	Provide Internet subsidy during period of Moratorium
3	MHRD	ICT in School	Provide opportunities to secondary stage students to develop ICT skills & ICT learning process.
4	Karnataka State Women's Development Corporation (KSWDC)	e-mahile	Soil testing kit, on-line Booking of air and railway tickets
5	SEWA NGO	Ujjas	IT programme to increase efficiency of rural micro enterprises
6	Hindustan Unilever	Project Shakti	To increase internet awareness
7	Department of Telecommunication	Sanchar Skanti	A suite of Mobile Value Added Service(VAS) to provide a variety of useful information to women & other schemes.
8	UNESCO sponsored project in India	NABANNA	Use of intranet portals, databases, and web based applications
9	MHRD	Sakshar Bharat	Provide & strengthen Adult education especially women.
10	India NGO IT	Mahiti Manthana	Empower rural women through ICT
11	Government of Kerala	Kudumbashree	To set up micro-enterprises based on ICT applications

### Success Stories of ICTs

With the help and support from the government, non-governmental agencies, corporate sector and other private agencies effort has paved the way for creating and establishing some success stories on ICTs and its effective implementation in the rural areas of India. In the next section, an attempt is made here to portray those success stories.

### **Networking Rural Women and Knowledge (NABANNA)**

NABANNA is a UNESCO sponsored project in India, to empower the women through the use of intranet portals, databases, and web

based applications. Through the NABANNA network women share local indigenous information and information obtained at group meetings and newsletters. Women gained more respect in their local community due to this project and the knowledge they got due to this project. Through this project, younger women are more confident to approach the job market. Further, women became more creative after learning programs like a paintbrush and related services. Thus, women developed a sense of unity among them and further led to enhance their leadership qualities.

### **Gyandoot**

Gyandoot is an e-government project started by the state government of Madhya Pradesh, which won the prestigious Stockholm Challenge award in 2000. The project provides a network of computers connecting to the rural areas and fulfilling the everyday, information related needs of the rural people. 20 kiosks (“soochanalayas”) were initially set up in various rural centres, with each kiosk typically serving a population of 20,000-30,000 villagers.

A further 18 kiosks were added later. Each kiosk was run by a trained operator, and can provide a range of services for a nominal service charge, ranging from around US\$0.10 for ‘ask the expert’ through US\$0.20 for registrations to US\$0.50 for use of the matrimonial site (many villagers subsist on less than US\$2 per day). eTransparency-related information and services provided include:

- *Land records:* farmers need an official map and land record of their land ownership if they are to apply for loans. It was intended that they could apply for these via the kiosk, and then come later to collect the official documents.
- *Below poverty line and other lists:* government provides special welfare schemes for those families in a village deemed to be living below the poverty line. This list - previously available only to governing bodies in the village - is now available online, so that families can check directly to see whether or not they are listed. Lists are also available relating to public distribution of food, and pension and rural development scheme beneficiaries. There are also details of the grants given by government for use by village committees.
- *Grievance registration:* if a citizen has a grievance to raise against a public servant, they previously had to travel to district headquarters. Now registration and progress reporting could all be done remotely, through the kiosk.

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- *Market prices:* related to e-transparency in markets rather than government, this is the facility by which prices for agricultural goods from the district wholesale markets are made available to farmers via the kiosk. Having such prices would enable them to wait at home until the right price is reached, rather than having to rely on intermediaries (or make a special journey to market, which might be up to 25 kilometres distant, needing 4-5 hours' travel time with a typical journey cost of around US\$0.50 plus loss of income).

### **M. S. Research Project**

M. S. Research Project in Pondicherry is providing internet connectivity and to spread the information to the villages the state. The project has developed a "hub and spokes" distribution model where Web-based data are downloaded in a community with an Internet connection and subsequently relayed through a local voice/data network to community Village Knowledge Centre's (VKCs) in six nearby villages. This project have both connectivity and content, is designed to empower rural families with new knowledge and skills based on the Gandhian principle of antyodaya (i.e., unto the last), where the empowerment starts with the poorest and the most underprivileged women and men. In this model, the local population will have a sense of ownership of the Rural Knowledge Centre (RKC). It will be client managed and controlled, so that the information provided is demand and user driven. The local population should be willing to make contributions towards the expenses of the RKC, so that the long-term economic sustainability of the programme is ensured. Contributions in cash or kind generate a sense of ownership and pride and create an economic stake in the operation of the centre. The local communities should be able to run the centres when the implementing agency moves to other regions. The hub centre and RKCs should act as a rural library and much more. Each hub centre may cover 25 to 30 villages within a radius of 60 km. Each hub centre will consist of at least three networked computers, one scanner, two web cameras, internet facility, one printer, one digital camera, solar backup facility, etc. The RKCs should be located in a public place and not to be associated with one group or caste; should allow everyone to take part. Each RKCs should have two-way communication with hub. RKC will consist of two to three computers [depending on village population / needs], a web camera, phone, a printer, notice board, etc.

## **Datamation Foundation**

Datamation foundation in collaboration with the UNESCO has set up a community media center in a Madarasa in extremely backward Seelampur-Zaffrabad in New Delhi. The project aims to empower girls with the basic computer skills for their better future. The ICT centre aims to impart computer skills and build the capacities of young women. Two courses in computer training are offered – one at the basic level and the other advanced, on desktop publishing and screen-printing. The ICT centre is also an open learning centre for young girls and women, providing them interactive multimedia content for enhancing their vocational and life-skills, and providing rights-based information on various issues.

The other significant goals of the initiative are development and dissemination of local content through a participatory process for enhancing vocational skills and also to overcome the language barrier which non-English speaking users of internet often face. As mentioned before, the research also brought up the need felt by the participants to develop local content and participate in this process themselves.

There are over 100 women visiting the ICT centre everyday and the total enrollment for the computer training is around 100 at any given time. More than a thousand young women have been trained in basic ICT skills at the centre since the inception of the centre. Developing local content and facilitating their access to relevant content and information have been the other significant areas in this initiative.

## **Dairy Information System Kiosk**

Dairy Information System Kiosk (DISK) is a project in Gujarat, which provides Internet connectivity and a portal at the district level serving transactions and information needs of all members. DISK has improved efficiency of milk buying process at 2,500 rural milk collection societies. The DISK project was conceived with two components; 1) an application running at the society level that could be provided Internet connectivity and, 2) a Dairy Portal at the district level serving transactional and information needs of all members and staff in the district co-operative structure. The software used at the society level was developed to provide: Data analysis and decision support to help a rural milk collection society in improving its performance i.e. increasing milk collection. Data analysis to improve productivity and yield of milch cattle. Farmers with facilities to place orders for goods and services offered by different agencies in the co-operative sector and seek

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information on subjects of interest. The services to be offered at these centres would include; 1) Delivery of information related to dairying, including best practices in breeding and rearing milch cattle, scheduling of government and other private sector agency services, and collecting feedback on the quality of service provided to the catchment area; 2) Access to a multimedia database on innovations captured by SRISHTI (an NGO working with IIMA) from hundreds of villages, covering agricultural practices, medicinal plants, home remedies, tools and implements, etc., and a multimedia format that has captured the description of the innovations provided by innovators and a visual presentation of the innovations; 3) use as a communication centre offering services like email, fax and Internet telephony (if Internet telephony is permitted); 4) Internet Banking Services and Automated Teller Machines (ATMs), which will enable the milk societies to credit payments directly to sellers' bank accounts. (The sellers already have plastic card identifiers. The card identifier may have to be upgraded to smart cards carrying biometric identification. The cards can be used to withdraw cash from ATMs); 5) a way for farmers to download Government Forms, receive documents (from a Government site) and order supplies and agricultural inputs from manufacturers; and 6) a means of communicating with farmers via the automatic printing process of daily payment slips.

### **Akash Ganga**

Software called Akash Ganga has been developed with special features to enable speedier collection of milk and faster disbursement of payments to dairy farmers. AKASHGANGA is committed to spread information technology among rural masses. We identified milk cooperative societies where families are members & visit the society to sell milk of cattle owned by them twice a day. Spread of information & technology initiated with automating their routine milk collection process which was done manually. Beginning with computer & software in regional language, weighing scale, card reader & instrument to integrate the full process, we developed accounting system to automatize and integrate accounting function in the system. AKASHGANGA Milk Analyzer which measures FAT, SNF (Solid but Not FAT) and Protein in a given sample of raw milk. This analyzer has been developed considering the need of the village cooperative society. AKASHGANGA is totally automatic Microprocessor/ Computer based milk collection systems is specifically made to meet the needs of Village CoOperatives

and its members. Milk Collection Process becomes simple, fast, accurate and reliable.

### **Success Stories from around the World**

ICTs have become everybody's necessity and it became reality with the help and support from the different governments across the continents and agencies such as United Nations. With their consistent help and encouragement, there are number of success stories which are portrayed in the next section. This will definitely benefit the women who are in the verge of poverty and unemployment in the rural areas of India.

### **The World Wide Web as a Tool of Empowerment**

The growing access of the web in the late 20th century, has allowed women to empower themselves by using various tools on the Internet. With the introduction of the World Wide Web, women have begun to use social networking sites like Facebook and Twitter to start online activism. Through online activism, women are able to empower themselves by organizing campaigns and voicing their opinions for equality rights without feeling oppressed by members of society.

### **Bloggers**

In recent years, blogging has also become a powerful tool for the educational empowerment of women. According to a study done by the University of California, Los Angeles, medical patients who read and write about their disease are often in a much happier mood and more knowledgeable than those who do not. By reading others' experiences, patients can better educate themselves and apply strategies that their fellow bloggers suggest. With the easy accessibility and affordability of e-learning (electronic learning), women can now study from the comfort of their home anywhere, anytime. By empowering themselves educationally through new technologies like e-learning, women are also learning new skills that will come in handy in today's advancing globalized world.

In Kenya, women and men weavers were trained in using the internet to learn new weaving techniques and access more realistic prices for their products. In Uganda, the Uganda Media Women's Association established a radio programme – Mama FM – where women can actively participate and learn about development issues such as, among others, human rights, children, governance, nutrition and health. The UNDP telecenter project in Ukraine applies ICTs in

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agriculture and farm management to support women farmers, who identified lack of information and networking tools as the major obstacles to their becoming successful entrepreneurs in a new market economy. There are three types of women empowerment as reported by UNDP.

- *Economic empowerment:* Women are economically empowered when they are supported to engage in a productive activity that allows them some degree of autonomy. This type of empowerment is also concerned with the quality of their economic involvement, beyond their presence as poorly paid workers.

### Information and Communication Technology

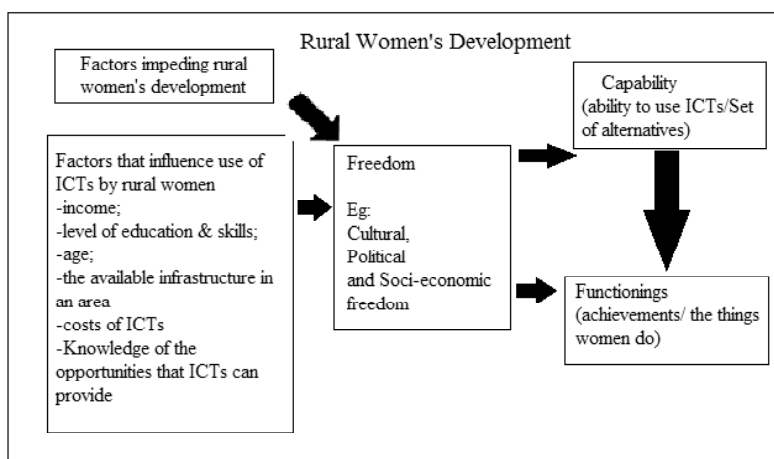


Fig: Capability approach applied to the use of ICTs for rural women's development

- *Social empowerment:* This is a process of acquiring information, knowledge and skills; and supporting the participation of women in social organizations without any gender discrimination in day-to-day activities. It is also concerned with inculcating a feeling of equality instead of subordination among women.
- *Political empowerment:* Source : [www.intechopen.com](http://www.intechopen.com)

It is concerned with enhancing the power of voice and collective action by women. Besides, it ensures equitable representation of women in decision-making structures, both formal and informal, and strengthens their voice in the formulation of policies affecting their societies.

As gender inequality is embedded in a series of systemic inequalities, there is a need to employ different types of empowerment. Economic, social and political empowerments are all interrelated and all these are critical for women empowerment, though the emphasis varies during different stages in the empowerment process.

Women can use ICT tools in number of ways especially in the areas of education, business, services and social service activities.

### **Education**

Women can use computers at the different levels and age groups from pre-university to university level which helps them to continue their education.

1. A faculty member can upload their course contents along with lecture notes so that any student girls or boys misses a lecture, can download the same and do it at home.
2. It should be the responsibility of government to sponsor learning tools available to women.
3. High speed broadband internet access for women at university, college and school level.
4. ICT provides links with other schools or with businesses.
5. Computers in schools provide wider access to ICT and encourages new ways of learning.
6. Interactive Learning packages are available on CD for different subjects.

### **Knowledge Society**

Knowledge which becomes the fundamental source for all economic and developmental activities in the knowledge society of which women form an equal part. ICT networking opens up a new way of interactive communication between government bodies, NGOs, academic and research institutions, and the civil society.

### **Employment**

ICT has played an important role in changing the concept of work and workplace. ICT offers women flexibility in time and space and as a result of the ICT, a high proportion of jobs outsourced by big firms are going to women. ICTs enable women to reach markets far from home and sell their goods, providing greater access to regional, national and global markets. An article in The Guardian describes how Elsouk, an e-commerce website set up with World Bank assistance, helps women

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artisans from Morocco, Egypt, Jordan, Tunisia and Lebanon sell their products abroad and even develop B2B direct relations. The Tortas Peru confectionary website set up by housewives in Peru enables women with children to work from home and earn an income. Products are sold directly online thus cutting out the middleman and maximizing profits; likewise inputs are purchased directly, once again reducing costs.

The Guardian article also describes the story of a woman weaver from Kancheepuram in India who wove beautiful sarees that she was forced to sell at a very low price to a middleman as she had no access to other markets for her products. IndiaShop posted photos of her sarees on their website and was able to procure orders for her at a very good price, thus preventing her being exploited by a middleman.

### **Entrepreneurship**

Tele-centers can solve these problems by combining home work with social spaces and organization. One way to do this is to move to Entrepreneurship on the internet. The internet which is the main element of ICT to help organize and build harmony with and between people working from home offices. Rural women in developing countries may be able to sell their products directly without going through middlemen. PEOPLink is one such organization which has been helping women's communities traditionally involved with handicrafts to put their products online in the world market.

### **ICTs should Promote Democratic Communication towards E-governance**

ICTs are increasingly being used as necessary and effective ingredients in communications strategies. The potential of these new technologies for participatory and democratic communication and the opening up of new communication spaces are seen as main contributions to social development and transformation. One must be mindful, however that these spaces can exclude and alienate women who are less articulate and who may not speak the dominant international languages that are often used in these discussions. Indicators should take account of the means available that enable people/communities to feed their voices into debate and dialogue. The underlying assumption of the use of ICTs for information sharing and communication is that it provides a means for the sharing of knowledge and information directly with those who generate them. The quality rather than the

volume or quantity of information generated is more meaningful as an indicator.

While women's increased participation in communication spaces is an indicator for the positive use of ICTs, it is even more important to measure their role in these spaces. Some of the indicators could be their involvement in the major decisions related to the initiative. This will ensure relevance and meaning – a vital component for any intervention.

### **Conclusion**

In the paper an attempt is made to explain the processes involved in the ICTs and its nitty-gritty issues and also as argued by scholars that ICTs serve as an instrument of awareness generation among the marginal and vulnerable sections of the society. It is also viewed by many that ICTs have become to the voiceless in the rural, remote and interior areas of the country. Further, ICTs can play a significant role in combating rural and urban poverty and fostering sustainable development through creating information rich societies and supporting the livelihoods of the poor and the marginalized.

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# The Efficacy of English Teaching at Lower Primary Level in Government Aided Schools of Assam and the Necessity of Mother Tongue Based Multilingual Education: A Case Study

Mrs. Bibha Devi

## Abstract

In education, a language is used not only for simple communication but also to meet the cognitive and academic demands of the classroom. Hence, it is important to develop along with the Basic Interpersonal Skills the Cognitive/ Academic Language Proficiency (CALP) of the learners in that language in a systematic manner. At the same time, research on bilingual education has proved that literacy and cognitive skills can be transferred from one language to another and do not need to be learned afresh for each new language. Also, the more developed the first language, the easier it will be to develop the second language. The present study is a case study based on the primary data collected from some lower primary schools of Dibrugarh district and Kamrup district of Assam. This study aims to bring about a vivid description of the real scenario and prescribe appropriate policy for the educationists and policy makers.

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## Introduction

English has become a very popular subject. It has high demand as it is regarded as a ladder to a world of economic security, nowadays. For this reason, English has been introduced very early in schools as a subject where another language is used as a medium of instruction (MOI). However, whether teaching English from a very early stage or teaching learners in an English medium school has really resulted in better proficiency in the language is questionable. This study aims at finding out what is happening in Assamese medium schools, especially in the lower primary level and to suggest a more effective methodology for teaching learners a second language such as English by utilising the resource (their proficiency in the mother tongue) that these learners bring to school with them.

Dibrugarh is a small town situated in the west of Assam. This place is very famous for tea gardens. It is a multicultural and multilingual town. Similarly, Kamrup district is situated at the centre of the state. Guwahati city, the gateway to the North – Eastern states is in Kamrup.

Assamese is one of the majority languages of Assam. It is the state language and the language of instruction in the government schools and also in private Assamese schools. Another very significant language is English which also has the status of an official language. English is a very significant language as it provides access to better job opportunities and the global information/ knowledge. So there is a growing demand for English as a medium of instruction in Assam too. Here, both Assamese and English languages are very popular as languages of instruction (LoI) and both are taught in the formal education. Gradually, it has been noticed that people have been giving more value to English as languages of instruction LoI. It has been observed that parents prefer to send their learners to English medium schools instead of sending them to Assamese medium schools. Succumbing to this demand, the government has also started teaching English as a subject from classKa-shreni( the entry level optional grade below grade I) itself.

This changing attitude of people regarding education in mother tongue calls for a scrutiny of the existing mother tongue teaching practices. Equally important is to evaluate the methodology/ strategies in which English language which is a foreign language is introduced in the formal education system.

Research has proved that when learners get an opportunity to learn reading and writing skills in their mother tongue, i.e., literacy in mother tongue, they can transfer those skills to any other language.

When learners get formal education in a second language or rather a language other than mother tongue they face problems or challenges at two levels/layers- First, learning a new language, and Second, acquiring new knowledge through that language. On the other hand, in the early years, when learners come to get formal education in school they already have some command over their mother tongue (MT). They can speak fluently in their MT and talk about simple concrete everyday things in their local environment. Also, they get immediate feedback if they do not understand something. They already acquire the basic grammar of the language and have a vocabulary of concrete words. Their competence in their MT enables them explain their basic needs in that language. (all these skills can be grouped under BICS).It has been proved that the level of development of learners' mother tongue (L1) is a strong predictor of their second language (L2) development. Their knowledge and skills transfer across languages, from the L1 to the new language(s) they learn. It has been proved that the deeper a student's level of L1 cognitive and academic development, the faster they will progress in L2. The significance of effective mother tongue teaching has even been emphasized in the National Curriculum Framework of India, 2005 (NCF-2005). "In language, a renewed attempt to implement the three-language formula is suggested, along with an emphasis on the recognition of learners' mother tongues, including tribal languages, as the best medium of education. The multilingual character of Indian society should be seen as a resource to promote multilingual proficiency in every child, which includes proficiency in English. This is possible only if learning builds on a sound language pedagogy in the mother tongue." NCF-2005 Executive Summary (pages VII-IX)

### **Literature review**

There are two views regarding the use of L1 or MT in the existing literature. One of these views claims that the use of mother tongue in the L2 classroom takes away time of exposure to target language. According to this view, MT is usually considered as the major barrier to L2 development. The followers of this view insist on using English exclusively or to the maximum time in English Language as an LOI. However, recently, this view has been challenged and the role of L1 as learning/teaching resource for L2 development has been emphasized.

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The choice of language to be used in school education has a significant impact on the cognitive development of a child. Research in the field of literacy and bilingual education has discovered the following outcomes:

- The more developed the first language, the easier it will be to develop the second language and vice versa. When learners are taught through an underdeveloped second language, their common underlying proficiency will not operate to its best effect (The threshold theory)
- Learners who study only in their second language will not be able to build on their L1 development
- Literacy and cognitive skills can be transferred from one language to another and do not need to be learned afresh for each new language (The Interdependence Hypothesis)

Thomas and Collier found in their study that immersion to L2 from the beginning and learning only in L2 does not necessarily result in better L2 learning. They have found that

*“English (L2) language learners immersed in the English (L2) mainstream ... showed large decreases in reading and math achievement by grade 5 when compared to learners who received bilingual/ESL services. The largest number of dropouts came from this group.”*  
Thomas and Collier, 2002

Research has found that if MT of learners is not developed satisfactorily for them to become fluent readers and writers, their proficiency/competence in the L1 such as understanding of the vocabulary and syntax of their own language, and the ability to decode a text written in that language will be limited. These gaps in their understanding of the structure of their first language and literacy skills reduce their ability to learn a second language (L2). To sum up, a strong foundation in MT is crucial for learning another language. What Cummins (2000) states, in this connection, is very significant and influencing in the area of research in Bilingualism and bilingual education points out:

*“The level of development of learners’ mother tongue is a strong predictor of their second language development...”*

*and*

*“Learners...with a solid foundation in their mother tongue develop stronger literacy abilities in the school language.”*

Baker states that in the case of a bilingual, depending on the degree of language development in both languages, their cognitive functioning can be viewed as integrated, with easy transfer of concepts and knowledge between languages. Also, he mentions that contextual clues that are provided and the degree of cognitive demands in a task affects the understanding and thinking of a child. He concludes that successful cognitive operations in the classroom depend on matching curriculum tasks with language competences. (Foundations of Bilingual Education and Bilingualism, page 173, 1996)

Many studies have discovered that the further the child moves towards balanced bilingualism, the more are chances of cognitive advantages over monolingual learners. (e.g. Cummins & Mulcahy, 1978; Duncan & de Avila, 1979; Dawe 1982, 1983; Cummins 200b; Bialystock 2001a) One such significant theory on bilingualism is the Thresholds Theory. This theory summarises partially the relationship between cognition and bilingualism. Toukamaa and Skutnabb-Kangas (1977) and Cummins (1976) first proposed this theory. According to them the relationship between cognition and bilingualism can be compared with the idea concept / idea of two thresholds. Each threshold represents a level of language competence that has consequence for a child. By reaching the first threshold level, a child avoids the negative consequences of bilingualism. Next is the second threshold level by reaching which she can experience the advantages of bilingualism.

Studies have proved that L1 is not only a *medium* for communication, but also the most powerful *mediating tool* for thinking ([Vygotsky, 1987]).

An exhaustive literature review reveals that there is a need for an evaluation of the English Language Teaching at the Lower Primary level in Assamese medium schools and to see if it is influenced by the quality of mother tongue teaching, in this case, the Assamese language.

Research has proved that effective teaching of mother tongue(L1) literacy is very crucial for successful teaching of a second language (L2). One very effective teaching approach that has been used for teaching mother tongue is the mother tongue- based multilingual education. At this juncture it would useful to discuss the features of this approach and some activities that are used in this approach.

### **Features of Mother Tongue Based Multilingual Education (MTB MLE)**

There has been a lot of research on the positive consequences of learning beginning literacy in a child's mother tongue. Mother tongue

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Based Multi Lingual Education (MTBMLE) has devised very effective methodologies for teaching through the mother tongue of learners in a bilingual/multilingual context. Also, this approach applies systematic steps for introducing a second language, so that the learners can easily and effectively transfer the language skills they have mastered in the first language. In a multilingual state like Assam, bilingual education is a very common sight. However, this does not mean that the quality of education is high in the existing schools. A widespread understanding of MLE programmes suggests that instruction in such a programme takes place in the following stages:

Stage I- learning takes place entirely in the child's home language (L1).

Stage II- building fluency in the mother tongue (L1) and introduction to oral second language (L2)

Stage III- building oral fluency in L2 and introduction of literacy in L2

Stage IV- using both L1 and L2 for life-long learning

In a Mother Tongue Based MLE system, a second language is introduced using activities that are interesting, easy, and engaging. Some activities that are commonly used are briefly described below:

Some activities that are used in MTB MLE for introducing and building fluency in Oral L2 are given below,

- Total Physical Response (TPR) is a teaching method that involves listening to short commands in L2, they observe someone doing the actions as directed in the command and they do the action themselves. A TPR lesson generally involves 6 steps. In a TPR lesson the learners do not need to talk in L2. They only need to listen, observe, and respond in actions. The teacher standing in front of the class say a command in the target language, E.g. "Stand up" in English. As the teacher gives the commands/directions she follows it herself/demonstrates what to do in the class. She stands up and says "Sit down!". Every TPR command is repeated three times first by the teacher. Then the teacher asks the learners to do along with her. Next, one additional command is given, e.g. "Stand up...jump....sit down!".
- The teacher can give "draw and describe" activities. She can give the learners- a general topic related to the weekly theme. (For example: If the theme is "family" the general topic might

be “daily activities in your family”). Volunteers come to the chalkboard and draw picture of something related to that topic and then tell why they chose that picture.

- The teacher can show the learners how to play game and then ask them to play it in groups. In this game, the learners need to look around the room and find something interesting. (e.g., if someone is wearing a red frock and if the learners have already learned the words “frock” and “red”. Then the teacher can say, “Someone is wearing a red frock. Who is that?” The first child to identify the girl gets to ask the next question. Similarly, this game can be played using terms for size, such as big, small, etc. and shapes, such as round, rectangular, oval, prepositions, such as- above, below, etc.
- Relay questions about a child can be asked. Learners are asked to stand in a circle and the teacher stands in the middle she takes a small ball and rolls it to one child. She asks that child a question about herself or himself and lets the child answer. At the beginning stage, the teacher first demonstrates how to reply the questions. She helps the learners whenever necessary. She repeats the same activity with rest of the learners. Learners are encouraged to help each other.
- The teacher says a known L2 word. Then she asks the learners to think of MT words that start with that same sound (In this activity the teacher should not use L2 words that start with a sound not found in the MT)
- The teacher points to an action in a picture and asks “What is s/he doing?” in L1. The learners are required to respond in their MT. Then she asks the same question in L2. She helps the learners in answering the question.

Activities that are used in MTB MLE for introducing and building fluency in L2 literacy are as follows:

- Learners are taught to use L2 to relate events in a sequence, describe setting, list steps in procedures, identify beginning, middle, and end of oral and written narratives.
- The teacher gives instructions to the learners (e.g.: go to the \_\_; pick up the \_\_) that require them to read labels on things in the classroom.
- Learners are taught to transfer reading strategies from the MT to L2 by involving them in shared reading of story books (Big books and Small books)

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- Teacher helps the learners in developing language experience stories in L2 and put on poster paper.

The following activities are used for introducing writing in L2-

- The teacher teaches the learners to write a word, phrase or sentence in the MT. After this, she asks them to write the same thing in L2 and asks the learners to describe in L1 how the two ways of writing are different.
- Learners are made to apply principles of L2 writing system by encouraging them to write their own name labels for drawings, short and simple words, common phrases or sentences in the L2 script.
- They write L2 texts by writing short text (word, phrase, sentence or two about something special the student or a classmate did that day)
- Learners are encouraged to practice writing short, meaningful texts in L 2
- Learners are encouraged to create their own poster stories in small groups
- Learners are taught to write very short story about personal experiences in L2 (and also L1)
- They are, also, made to draw pictures and write stories of two/ three sentences about cultural themes and topics.

The Department of Education, Philippines, Bureau of Elementary Education, Mother Tongue Based MultiLingual Education, First Grade L1Language Curriculum Guide Based on Department of Education Language Competencies Draft.)

### Methodology

For this study, five Government aided lower primary schools were visited in the Dibrugarh Town of Dibrugarh district and in Guwahati and Dora Kahara areas of Kamrup district of Assam. All these schools were Assamese medium schools. Learners studying in classes II, III , and IV were tested. Class II learners were selected because they already had exposure to English from class one or even from class *Ka-shreni*. Also, they are taught in their mother tongue for at least for one year, i.e. from class I as *Ka-shreni* is not a compulsory class. Learners of the age group of 6-9 were tested. The learners belonged to Assamese community. Names of the schools surveyed:

Dibrugarh District: Graham Bazar Boys' L.P. School, Graham Bazar Girls' L.P. School,

Kamrup District: Dora Kohora Lower Primary School , Lachit Xixu Bidyalay, Nambari, Guwahati, and Shankardev LP School

### **Rationale behind the Study**

Following the recent findings in research it can be expected that learners whose mother tongue is Assamese and who are studying in Assamese medium schools are getting all the advantages that education through mother tongue bestows, especially in acquiring a second language (in this case, English is the second language). The researcher wanted to gauge the level competencies attained by learners studying in these schools in the English language. In order to see if the learners studying through their mother tongue are able to acquire/learn English satisfactorily, the researcher focused only on Assamese learners studying in Assamese medium schools. It will be helpful to keep in mind that in Assam, English is taught as one of the subjects in Assamese medium schools.

### **Competencies in English that were being Tested**

#### ***Class II***

First of all, the learners of class II were asked to read aloud a poem from the class I textbook, the name of the poem was 'A Happy Child'. The rationale behind giving the learners to read a poem from a previous class was to give the learners a familiar text. As the text was familiar it was expected that they would be able to read out the poem fluently with correct pronunciation and intonation and also, that they would know the meanings of the words used in the poem and that of the poem as a whole.

When the learners were asked to read out the poem aloud individually, they struggled to read out the words, they did not know the correct pronunciation of some words. Some words from the poem were randomly picked up and the learners were asked to tell the researcher the meanings of these words. However, they failed to do so. One positive finding was that the learners could say the names of individual letters that had appeared in some of the words.

Secondly, the learners were asked in English what their names were and also instructed to give the reply in English using complete sentences. They did not know what they were expected to say.

Thirdly, the researcher wanted to find out whether the learners were able say and write with correct spelling the names of some familiar people/ objects such as, teacher, school, paper, etc., in English. The

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researcher used Assamese words for this purpose. The learners were not able to say the names of all the words in English, except those that were borrowed from English, e.g., pen, pencil, etc.

Finally, the learners were asked to write the letters of the English alphabet. Most of the learners wrote the letters correctly.

### ***Class III***

Firstly, basing on the same rationale as that for the first activity given to Class II learners, the researchers asked the learners of class III to read a poem from the English textbook prescribed for class II. The finding in this case was also similar. The learners could read only some words, one or two percentage of the total words. They read out the words with struggle. While reading out the poem, they did not use proper intonation. Also, they did not know meanings of all the words. It was observed that while reading out the text, some of the learners guessed the pronunciation of some words by looking at the beginnings and endings of those words, e.g. some learners pronounced the word 'breakfast' as 'basket'.

During the performance of the above activity, it was observed that the learners did not remember what they had read in the previous year. So, to avoid the influence of this time gap on their memory, the researcher, again, asked them to read something they had recently read and taught. Even this time, the performance of the learners was very poor. They could pronounce the words this time, but did not know the meanings of those words.

Secondly, there is an activity in the textbook which was aimed at teaching the learners some common and frequently used verb phrases. E.g. eat breakfast. The researcher randomly chose some nouns and asked them to provide the appropriate verbs that go with each of those nouns. The learners were found to be clueless.

Finally, they were able to write names of fruits and it was interesting to notice that all of them wrote the names of the same fruits. However, there were mistakes in spelling. Later on, it was found that all these names were taught to them in the class.

### ***Class IV***

Firstly, the learners were asked to read out aloud a poem from the class III text book. The name of the poem was 'Good Morning'. The learners could not read the poem fluently. They could not pronounce the words correctly.

Secondly, the learners were asked to tell the meanings of some words like trees, bees, awake, etc. from the poem. However, they were not able to tell the meanings of these words

Next, the learners were asked to read the prose piece 'Nina and the Baby Sparrows'. They were not able to read all the words from the text.

Also, the learners were asked some reading comprehension questions like,

Why did not Nina want to go the wedding?

However, the learners could not answer the questions.

Then, the teacher randomly selected some words from the text like aunt, married, wedding, dress, tears, cheeks, sparrow, bookshelf, etc. and the learners were asked to tell their meanings from the context. The learners were even encouraged to give the reply in their mother tongue. Sadly, the learners could not guess the meanings of these words from the context.

Finally, the researcher asked the learners to write three sentences about themselves or about their school. The learners could not write a single sentence in English, however, when they were asked to write on the same topic in Assamese, they wrote several sentences.

*The general findings of the study are listed below:*

All of the learners could identify the letters of the English alphabet.

Most of the learners could write the letters of the alphabet correctly in both block and cursive format.

The learners had a very limited stock of active vocabulary.

They exhibited signs of non-fluent speaking, such as, lack of confidence in speaking, hesitation, silence for a long time, and repetition.

In the classroom, all communication from the learners' side was in Assamese.

They were not able to describe any familiar object, e.g. the black board.

However, they could not pronounce / they had difficulty in pronouncing sounds like the voiced dental affricate, as in father,

The target group could not pronounce some specific English phonemes clearly, like - the long and short vowels, as in e.g. get and gate, the voiceless and voiced post-alveolar affricates, the post-alveolar voiced and voiceless fricatives. Also, they wrongly pronounced sounds represented by the letter 'G' as the voiced alveolar fricative when the correct pronunciation was the voiced post -alveolar affricate in words like bridge, juice, etc. Similarly, they pronounced the voiceless labio-dental fricative as the voiceless labial aspirate ph and the voiced labio-

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dental fricative as the labial aspirate; the voiceless and voiced dental fricatives as the voiceless alveolar aspirate stop and voiced alveolar stop respectively.

They were not able to fully understand English sentences and words. They could not answer questions based on a story that they had been taught.

They could not read out texts fluently.

When writing sentences, they could only copy sentences and memorize them. They could not write simple sentences on a topic.

Learners of class III and IV were able to write their names correctly.

From the above findings, it can be interpreted that the learners of Government aided/run lower primary schools, have not been able to develop English language skills to a satisfactory level. It is evident from the data analyzed that there is a gap between the actual English language proficiency of the learners and the proficiency level that they are presumed to have attained in order to be able to understand the language of the prescribed language.

### **Recommendations**

It is evident that the methodology of teaching English and teaching materials that are used are inappropriate for the target group of learners. Teaching of a second language like English, which is a foreign language in reality, needs some kind of supportive teaching.

To improve the present situation that exists in the Government schools, the researcher proposes the implementation of the teaching methodology applied in Mother Tongue Based Multilingual Education (MTB MLE).

### **Conclusion**

This paper endeavours to put forward the existing problem of application of inadequate teaching approach to teach literacy in the mother tongue and so for introducing English as a second language in the Assamese medium schools. Though the researcher surveyed only some schools of Dibrugarh and Kamrup districts, it is evident that the same problem exists in all Government aided Assamese medium schools of Assam. In order to overcome this, a review of the curriculum and teaching methodology is crucial. Existing practices in the field of MTB MLE will, surely, be very effective in improving the existing scenario. If this approach is applied, learners learning in their mother will definitely be able to become more competent in English.

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**English textbooks**

- Marigold book one: textbook in English for class I, NCERT, 2007
- Marigold book two: textbook in English for class II, NCERT, 2007
- Marigold book three: textbook in English for class III, NCERT, 2007

# Impact Assessment of Watershed Programmes using Geoinformatics Technology

T. Phanindra Kumar, P.Raj Kumar, DSR Murthy, V. Madhava Rao, P. Kesav Rao

## Abstract

Water is a natural resource vital for the survival of life. It is fast becoming a scarce commodity in most part of the world. In order to meet the growing demand for food, fuel and fodder of ever increasing population, land and water resources need to be optimally utilized. The basic objective is to increase production and availability of food, fodder and fuel; restore ecological balance. The community based watershed approach is highly essential in order to meet the needs of ever-growing population i.e. for providing food, fodder, fiber and shelter by rejuvenating land and water resources especially in rural areas. To achieve this goal proper management of natural resources by adopting suitable scientific solutions for optimum development of land, vegetation and water resources in a sustainable manner is essential to the maximum possible extent. It is felt that in our country a majority of the areas still require great thrust and appropriate measures. Therefore the study made an attempt to assess the Temporal Changes in the watershed Using the IRS satellite images of 1995 and 2014, and thematic maps like geology, geomorphology, soil and ground water data were used. The watershed proposed structure were verified using the geohydrology model and the impact of the watershed were compared using socio-economic and satellite data. The study found that there is

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CGARD, National Institute of Rural Development, Hyderabad.

a huge positive impact was identified due the watershed analysis in the study area.

## **1. Introduction**

The concept of Watershed development is that the development and management of the resources in the watershed should be taken up such as to achieve higher production that can be sustained without causing any deterioration in the resource base or causing no ecological imbalances. The aim is to prevent watershed degradation that results from the interaction of physiographic features, eliminate unscientific land use by appropriate cropping pattern, soil erosion thereby improving and sustaining productivity of resources leading to higher income and living standard for the inhabitants in the watershed area. Watershed as approach to development was first adopted in United States in Tennessee Valley for reducing soil erosion in the valley areas during early 1920s.

It requires timely and reliable information on available land and water resources, which could be derived from space borne multispectral data. Development of the watershed needs better understanding about the various natural resources their relations with each other and their relations with livelihood of the stakeholders. Sustainable land and water development is the primary objective of any watershed programme. This will promote socio-economic development through optimum utilization of natural resources and will mitigate the adverse affects of drought. Proper planning of watershed is essential for the conservation for water and land resources and their management for optimum productivity.

GIS has evolved as a highly sophisticated data management system to put together and store the voluminous data typically required for such studies. Thus, remote sensing and GIS together provide information base for efficient management water resources. The synoptic view provided by satellite remote sensing and the analysis capability provided by GIS offer a technologically appropriate method for studying these resources.

## **2. Methodology**

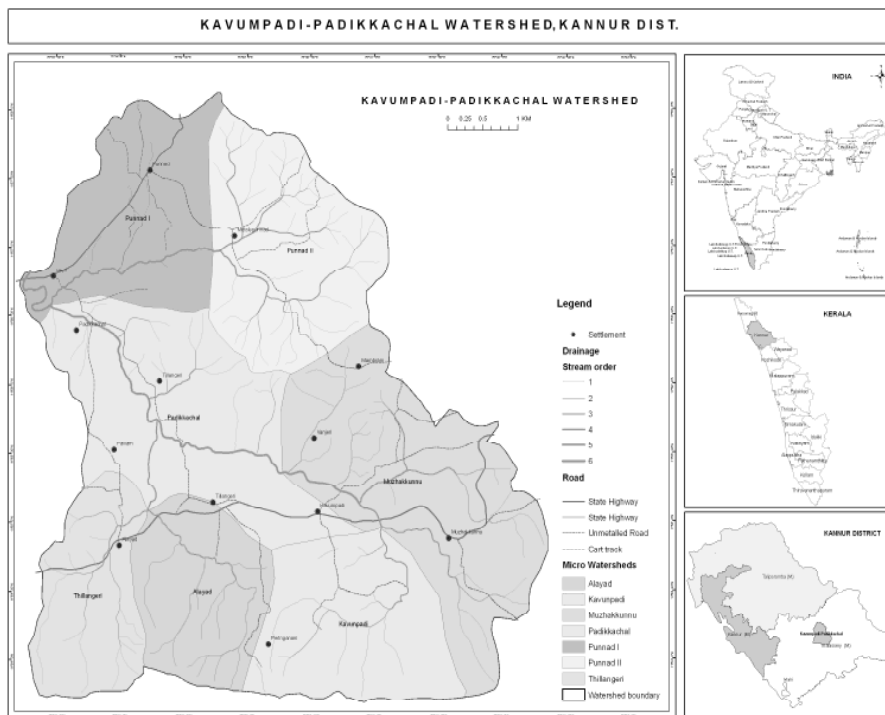
### **2.1 Study Area**

Geographically Kavumpady-Padikkachal watershed lies between  $11^{\circ} 53' 41.3''$  to  $11^{\circ} 58' 41.3''$  north latitude and  $75^{\circ} 38' 12.1''$  to  $75^{\circ} 42' 21.0''$

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east longitude. The watershed area is distributed in the ward numbers 6, 8, 9, and 11 of KeezhurChavasery, ward numbers 2 to 10 of Thillankery and ward numbers 6, 8, 9, and 10 of Muzhakkunnu Panchayats.

Kavumpady-Padikkachal sub watershed is having total area of 4153.73Ha spreading over Thillankery, Muzhakkunnu, Keezhur Chavasery and Maloor Grama Panchayats



*Fig 1: Study Area Map*

## **2.2 Data and Methods**

For the present research LISS-IV images from 1995 and 2014 were used with the resolution of 4.8 meter. The 1:25,000 scale toposheet were purchased from Survey of India (SOI). From that toposheet 20 meter contour line were generated and it was converted into TIN and DEM by using ArcGIS and ERDAS IMAGINE software. In addition to that drainage, slope, aspect, geology, geomorphology, soil layers were prepared and it was converted into map using ArcGIS software. The satellite images were classified according to the NRSC classification

accordingly 1995 and 2014 Land Use/Land Cover (LU/LC) map was generated. All together by using watershed assessment tool the watershed map as well as watershed proposed structure was planned and it was implemented by using government scheme. Finally the pre and post impact was identified using socio-economic data and GIS technology.

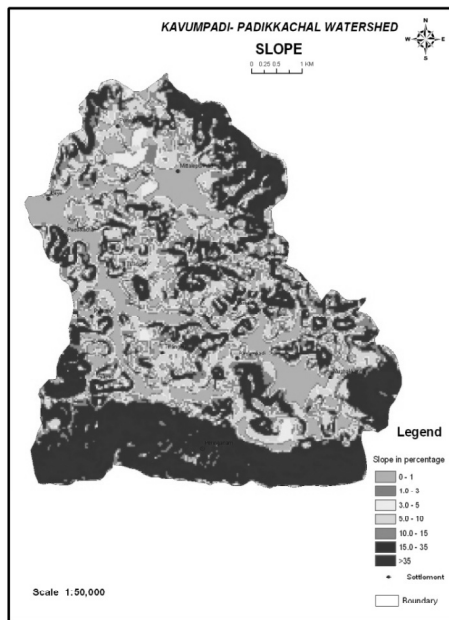
**2.3 Map Interpretation**

**2.3.1 Terrain Analysis:** Terrain analysis process involves creation of elevation surfaces such as Triangulated Irregular Network (TIN) and Digital Elevation Model (DEM) from elevation data available either in the form of spot heights or contours.

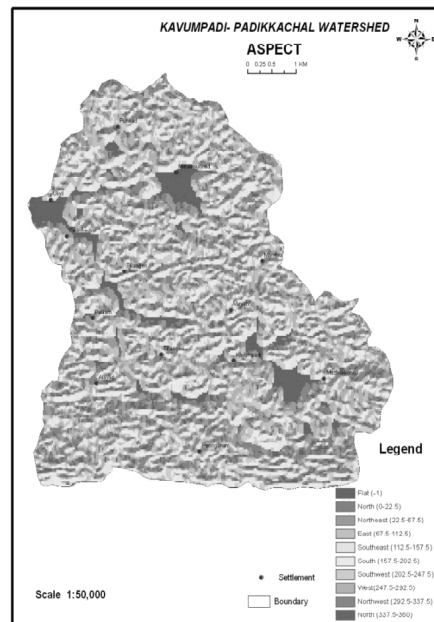
**2.3.2 Relief:** To generate TIN & DEM of the study area, contour with 10 m interval has been used. The relief map has been prepared by 10 meter interval contour.

**2.3.3 Slope:** The slope map of the study area has been generated from TIN by using ‘Slope’ option under Surface analysis tool.

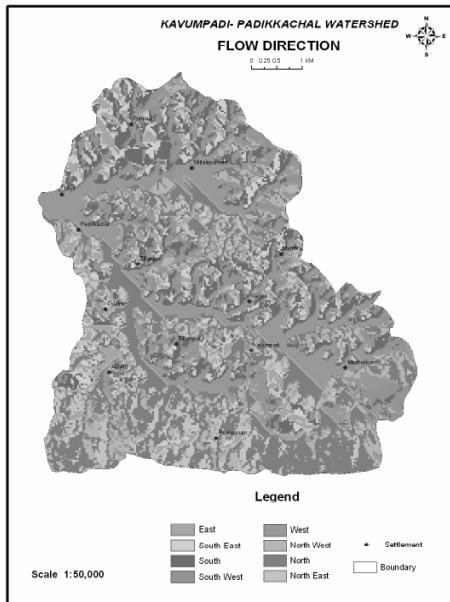
**2.3.4 Aspect:** The aspect values of the study area have been measured in the compass direction. I.e. from N-NE-E-SE-S-SW-W-NW (i.e. 0°-360° in clock-wise direction). Similarly, flat surfaces which do not possess any direction have also been depicted.



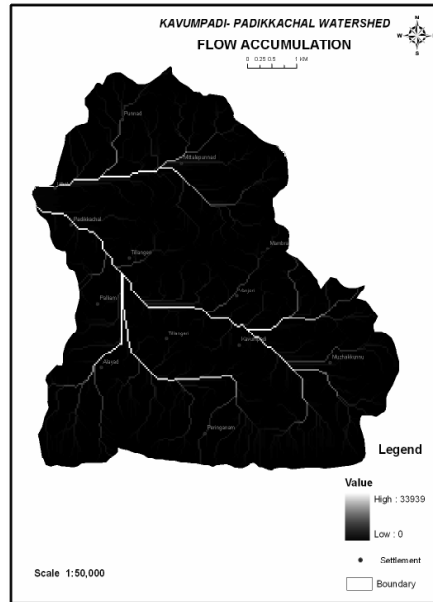
*Fig 2: Slope*



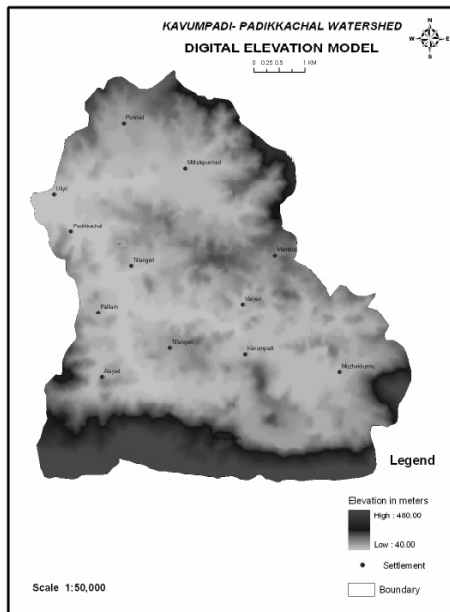
*Fig 3: Aspect*



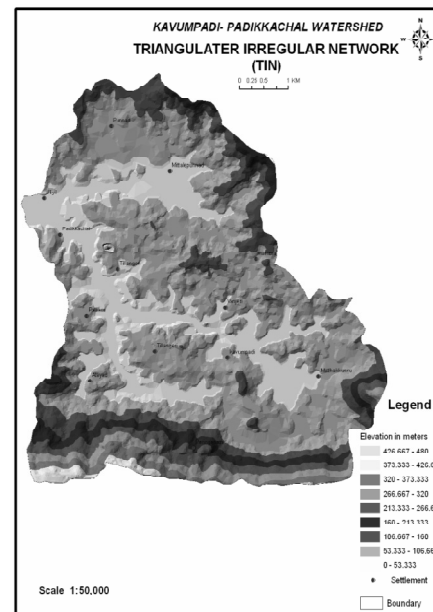
*Fig 4: Flow Direction*



*Fig 5: Flow Accumulation*



*Fig 6: DEM*



*Fig 7: TIN*

### **3. Resource Analysis**

#### **3.1 Geomorphology**

The methodology for preparing geomorphology map is described as follows. The synoptic view of satellite imagery facilitates better appreciation of geomorphology and helps in mapping of different landforms and their assemblage. The image-interpretation criteria, such as tone, texture, shape, size, location, association, physiography, genesis of the landforms, nature of rocks/sediments, associated geological structures, etc are to be used for identification of different landforms/geomorphic units. Lithology, drainage and contour maps are considered while preparing the geomorphology map.

In the study area, seven geomorphic units are delineated. They are alluvial plain, pediment, pediplain, structural hills, denudation hills and residual hills.

#### **3.2 Geology**

The study area geology has formation of Archean and Proterozoic period rock. Garnet-kyanite-siliminite- gneiss and Hornblende biotite gneiss occupy the large area of the Kavumpady-Padikkachal watershed. Hornblende biotitic gneiss constitutes the litho unit of Migmatite complex. Towards south and south-east, discrete metasedimentary and ultramafic sequences occur which have been designated as Wayanad Schist Complex and are considered equivalent of Sagur Group of Karnataka. They occur as isolated bands within charnockite and gneiss. Their contacts are generally concordant due to later folding, metamorphism and migmatization. The group comprises Garnet-kyanite-siliminite- gneiss, quartz-mica-kyanite schist, kyanite-silliminite-sericite and quartzite. Garnet-kyanite-siliminite- gneiss is widespread in the south, whereas the other members of Wayanad Schist Complex occur as linear bands, lensoidal bodies and vestiges to the west Peninsular Gneissic Complex, represented by Hornblende biotitic gneiss comprises a complex suite of gneisses and granites, representing the anatectic phase of migmatization of the schist complex. Dolerite represents the basic intrusive. Geology plays a very important role in ground water occurrence because texture of the rock is more important owing to their water holding and transmitting capacity. Geological structures i.e. Faults, Fractures along structurally weak planes particularly in hard rock areas have a definite control on aquifer characteristics because structurally weak planes act as conduits for the movement of ground water.

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### 3.3 Soil

Soil is a natural body differentiated into horizons of mineral and organic constituents usually unconsolidated, of variable depth which differs from the parent material below, in morphology, physical properties and constitution, chemical properties and composition as well as biological characteristics.

Utilizing the soil resources based on their productivity and capability lead to food economic and agricultural development of the region. The Soil, Land capability, Land Irrigability maps of the study area has been prepared on 1:25,000 scale using satellite images and other collateral data with limited field surveys.

The soil of the area is mainly of the Laterite type. The area is covered with four types of Soil.

1. Laterite soils
2. Forest Loamy soils
3. Gravelly clay soils and
4. Riverine Alluvium soil

*Table.1: Distribution of Soil*

Sl.No	Soil type	Area in ha
1	Laterite	1403.16
2	Forest loamy	157.31
3	Riverine Alluvium	699.23
4	Gravelly clay	1894.03
<b>Total</b>		<b>4153.73</b>

### 3.4 Land Use / Land cover

Land use and Land cover are influenced by geology, soils, geomorphology, and groundwater potential and provide a basis for understanding the patterns of agriculture and its development. Land use /Land cover map is prepared by visual interpretation of high resolution satellite data of 5.8 m IRS P6-LISS IV and with the help of survey of India Topographical maps, on 1:25,000.

The major categories identified are, crop land, plantation, Land with /without scrub, and water body. The detailed description of the individual classes is given below.

**3.4.1 Land with/without Scrub:** The land with scrub are the lands with soils that are too shallow, skeletal or chemically degraded lands with moderate to steep slope and are mostly covered in the scrubs of different densities and varying height. The total land area covered with scrub is 809.43ha. which is 19.49% of the study area.

*Table 2: Land use / Land cover*

Sl. No:	Land use and land cover	2014 (Area in ha.)	Area in percentage
1	Crop land	1556	37.46
2	Plantation	1249.31	30.07
3	Land with/ without Scrub	809.43	19.49
4	Water body	538.99	12.98
Total Area		<b>4153.73</b>	<b>100</b>

**3.4.2 Water Body:** The spatial extent of the water body is 538.99ha. It covers about 12.98% of the total area of the watershed.

**3.4.3 Crop Land:** The total land area covered with crop land is 1556ha. which is 37.46% of the study area.

**3.4.4 Plantation:** Cashew is ubiquitous in Kannur. It is cultivated in every panchayats, both in the form of large plantations and small holdings. The economy of Kannur depends mainly on cashew and coconut. This land use class is extensively distributed throughout the watershed. The major plantation crops in the study area are rubber, cashew, coconut and pepper. The total estimated area is about 1249.31ha. of the total geographical area.

### **3.5 Ground water Potential**

Ground water potential maps are prepared by integrating information on geomorphology, slope, lithology, structural features and the precipitation. Ground water recharge depends on favorable slope, permeability and degree of compactness of the rocks.

On the basis of ground water availability three major categories has been identified, high, moderate, low and very low ground water potential zone. Ground water potential is high along the river side and pedi-plain land. In the areas occupied by the structural hills, which are high linear ridges with steep slopes, the ground water potential rating is very poor, the area being dominantly a run off zone.

The people are mainly depends upon the dug wells for drinking and irrigation purposes.

*Table 3: Ground water Potential*

Sl. No	Ground water potential	Area in ha	Area in %
1	Good	345.28	8.31
2	Moderate	1192.28	28.71
3	Poor	1620.53	39.01
4	Very poor	995.64	23.97
Total		<b>4153.73</b>	<b>100</b>

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### ***3.6 Land Capability***

Land capability classification is a systematic classification of different kinds of land according to those properties which determine the ability of the land to produce common cultivated crops & pasture plants virtually on permanent basis (Tejwani, 1976).

The watershed is divided into three capability classes, which are numbered in Roman numerals from II to IV and subclass S.

Class II -land has moderate limitations that reduce the choice of crops.

It needs simple soil and water conservation practices and requires some attention to soils management.

Class III -land has severe limitations for use, hence it needs intense soil and water conservation treatment and requires careful soil management. Graded terraces are made on moderate slopes.

Class IV -land has very severe limitations. The soil and water conservation practices are more difficult to apply and maintain.

Subclass s is made up of soils that have soil limitations within the rooting zone, such as shallowness of the rooting zone, stones, low moisture-holding capacity, low fertility that is difficult to correct, and salinity or sodium content.

### ***3.7 Land Irrigability***

The interpretation of soil and land conditions for irrigation is concerned primarily with predicting the behavior of soils under the greatly altered water regime brought about by irrigation. To carryout land Irrigability classification of command areas, special interpretation and classification of soils for sustained use under irrigation are often required. The classification is based on effective soil depth, soil texture, soil permeability, coarse fragments etc. The soils are grouped into soil Irrigability classes according to their limitations for sustained use under irrigation, regardless of their location or the size of the individual mapping unit.

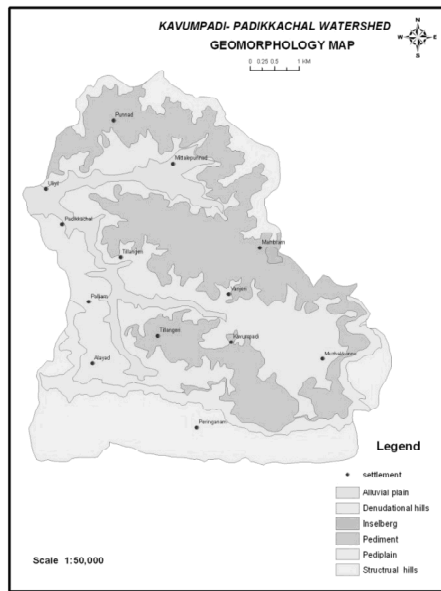
The suitability of land for irrigation depends on physical factors like quality and quantity of irrigation water and socio-economic factors like land development costs provision of drainage facilities production costs of individual crops.

The watershed has three Irrigability classes.

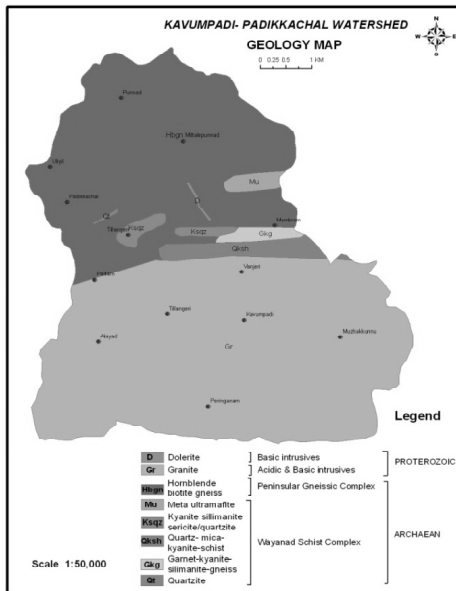
*Class II:* Lands That Have Moderate Limitations Of Soil, Topography Or Drainage For Sustained Use Under Irrigation.

*Class III:* Lands That Have Severe Limitations Of Soil, Topography Or Drainage For Sustained Use Under Irrigation.

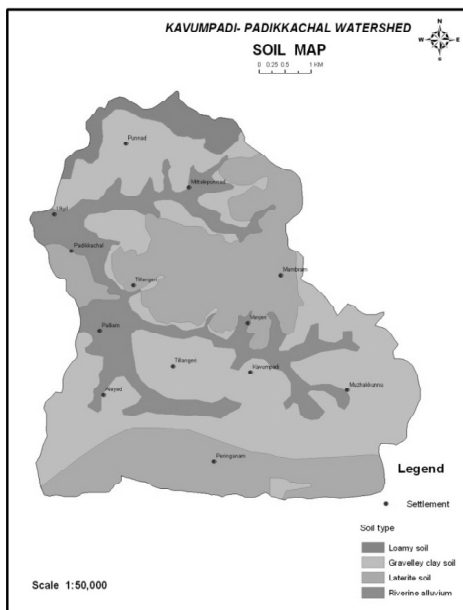
*Class IV:* Lands That Are Marginal For Sustained Use Under Irrigation Because Of Very Severe Limitations Of Either Soil Topography Or Drainage.



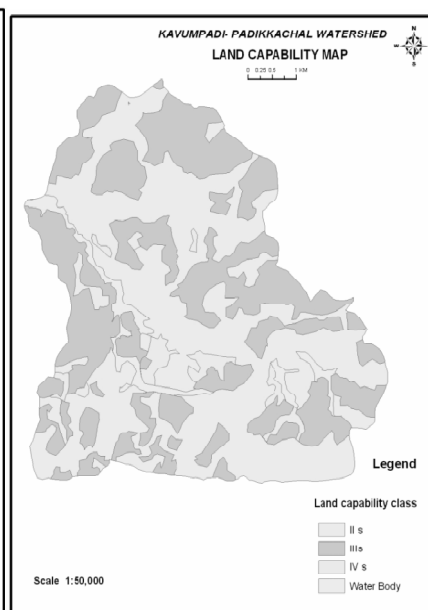
*Fig. 8: Geomorphology Map*



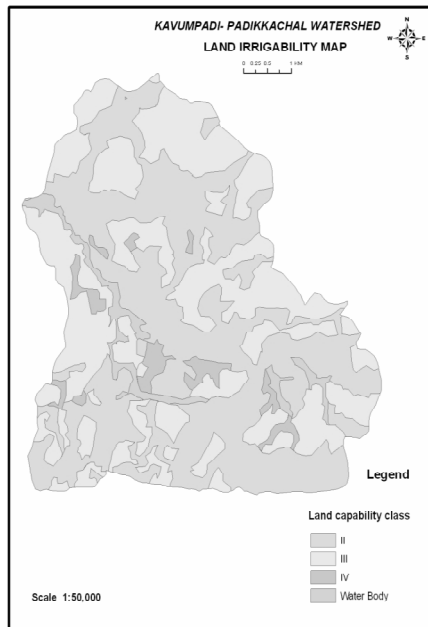
*Fig.9: Geology Map*



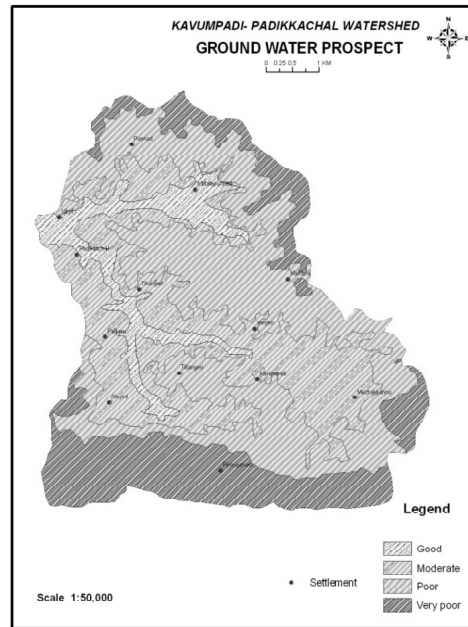
*Fig. 10: Soil Map*



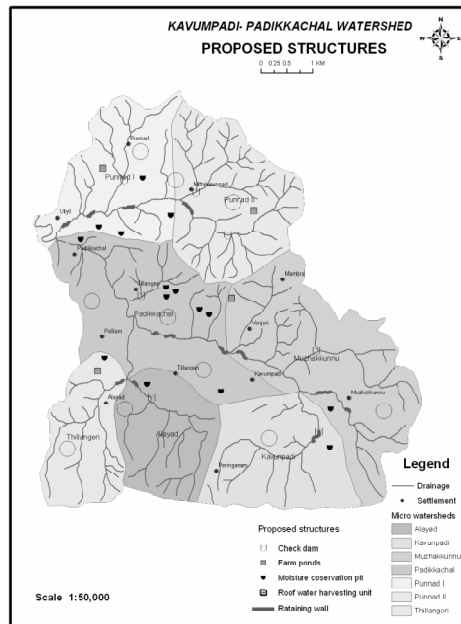
*Fig.11: Land Capability Map*



**Fig. 12: Land Irrigabili Map**



**Fig. 13: Geology Map**



**Fig. 14: Proposed Structure**

## 4. Results and Recommendations

### 4.1 Spatial Distribution of Land Use /Land Covers

The land use/land cover categories of the watershed have been grouped into four classes, crop land, water body, plantation and land with/without scrub.

**4.1.1 Crop Land:** These lands are primarily used for production of food. The area under crop land was 851.72 ha. in 2005 and 1556 in 2014

**4.1.2 Water Body:** The streams and rivers are included in this category. The major rivers flowing in the study area are the Kavumpadyriver and its tributaries. The total area under water body is 258.2 ha in 2005 and 538.99 in 2014.

**4.1.3 Plantation:** These lands are primarily used for production of commercial crops. The total area under plantation is 1907.92ha in 2005 and 1249.31ha. in 2014.

**4.1.4 Land with/without Scrub:** The land with scrub are the lands with soils that are too shallow, skeletal or chemically degraded lands with moderate to steep slope and are mostly covered with scrubs of different densities and varying height. Land without scrub is the counter part of the previous category, but without any vegetation cover on the land. The total area under this category is 1135.89ha. in 2005 and 809.43ha. in 2014. The following tables show the areal extent of Land use/Land cover in 2005 and 2014.

*Table 4: Areal Extent of Land use/Land cover in 2005*

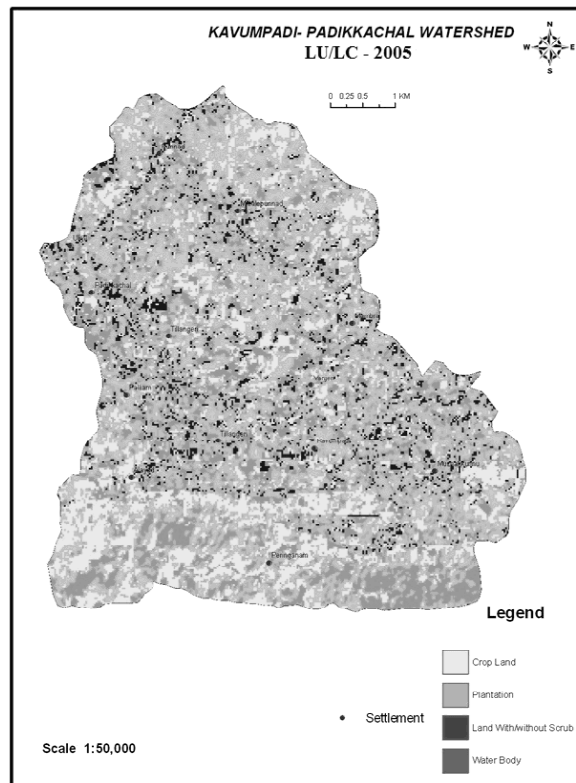
Sl. No.	LU/LC	2005 (Area in ha.)
1	Crop Land	851.72
2	Plantation	1907.92
3	Land With/without Scrub	1135.89
4	Water Body	258.2
<b>Total</b>		<b>4153.73</b>

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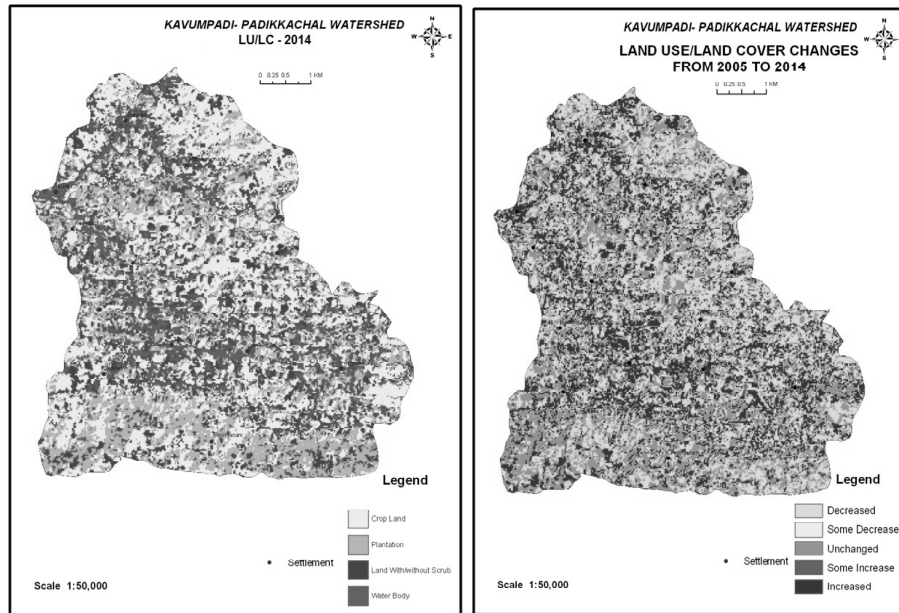
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*Table 5: Areal Extent of Land use/Land cover in 2014*

Sl. No.	LU/LC	2014 (Area in a.)
1	Crop Land	1556
2	Plantation	1249.31
3	Land With/without Scrub	809.43
4	Water Body	538.99
<b>Total</b>		<b>4153.73</b>



*Fig. 15: LU/LC - 2005*



**Fig. 16:** LU/LC - 2014

**Fig. 17:** LU/LC Changes 2005 - 2014

## 4.2 Land Cover and Land Use Changes

Land use and land cover are dynamic. Changes may involve the nature (for instance, from a dense forest to a natural savannah, or to cropland) or intensity of change (for instance from a dense forest to either a temporary smallholder’s field under slash-and- burn exploitation, or a permanent plantation), but may also include spatial (forest abatement at village level, or for a large-scale agro-industrial plant), and time aspects.

Land use changes can move in two directions: either, in the negative sense, leading to land degradation and loss of (production) potential, or, in the positive sense, resulting in a higher value or potential.

**4.2.1 Change Detection:** The sensing of environmental changes that uses two or more scenes covering the same geographic area acquired over a period of time.

Change detection is useful for monitoring: urbanization, agricultural development, forest land management, ice forecasting, etc. The most widely used methods are: Difference Image, Ratio Image, Classification Comparison, and Change Vector Analysis.

Image differencing is probably the most widely applied change detection algorithm (Singh, 1989). It involves subtracting one date of

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imagery from a second date that has been precisely registered to the first. According to recent research, image differencing appears to perform generally better than other methods of change detection (Coppin & Bauer, 1996).

Using remote sensing techniques the two season's data has been analyzed. The major changes are found in crop land and water body, it has increased 704.28 ha. (54.73%) and 280.79 ha.(52.09%) respectively. there is a decrease in land with/without scrub and plantation. The following table shows the details of changes in land cover and land use from 2005 to 2014. The increase in water body and crop land is positively correlated.

**Table 6: Land cover and Land use changes**

Sl. No.	LU/LC	2005 (Area inha.)	2014 (Area in ha.)	Changes	%of increase /decrease
1	Crop Land	851.72	1556	704.28	54.73
2	Plantation	1907.92	1249.31	-657.69	34.47
3	Land with/without Scrub	1135.89	809.43	-326.46	28.74
4	Water Body	258.2	538.99	280.79	52.09
<b>Total</b>		<b>4153.73</b>	<b>4153.73</b>		

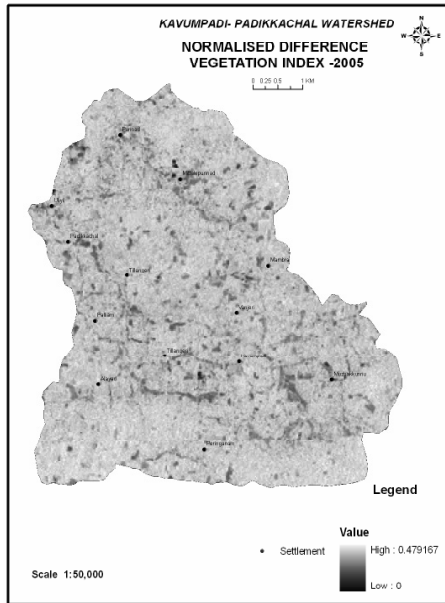
**4.2.2 Change Matrix:** Using this technique the unchanged land and the land converted to other types of lands etc. were identified. The following table shows detailed information on the converted land.

**Table 7: Change matrix**

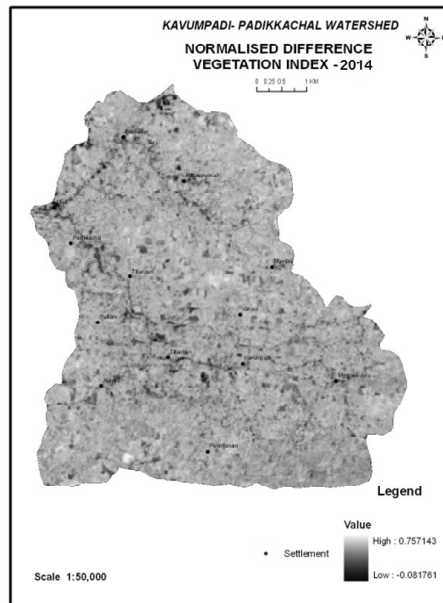
Sl. No.	LU/LC classes	Crop Land	Plantation	Land With/without Scrub	Water body	Total
1	<b>Crop Land</b>	539.44	143.31	122.75	46.5	852
2	<b>Plantation</b>	683.94	690.77	307.62	225.31	1907.64
3	<b>Land With/without Scrub</b>	292.44	342.12	316.65	184.68	1135.89
4	<b>Water body</b>	33.88	48.31	53.31	122.7	258.2

### 4.3 Vegetation Density

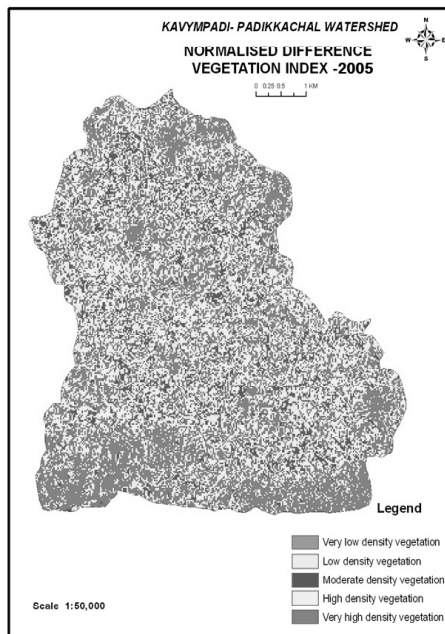
The Vegetation density in the study area has been divided in to five classes, very low density, low density, moderate density, high density and very high density vegetation. Compared to 2005 image, the vegetation density has increased in 2014.



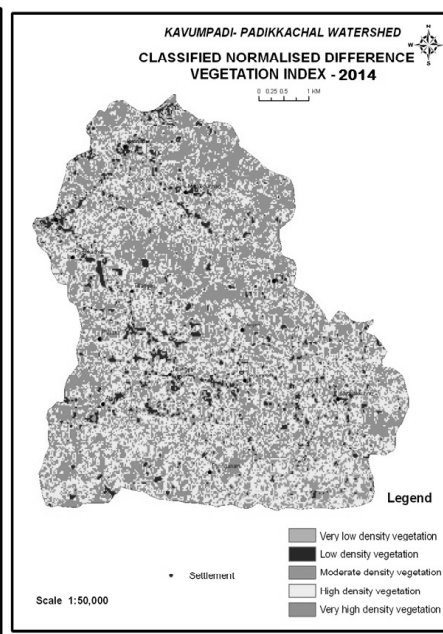
*Fig. 18: NDVI - 2005*



*Fig.19: NDVI - 2014*



*Fig. 20: Classified NDVI - 2005*



*Fig. 21: Classified NDVI - 2014*

## 5. Water Harvesting Structures and its Impact

The important structures and systems proposed during the watershed project is

### 5.1 Natural Resources Management

All the works under this are proposed for the conservation / management of soil, water and biomass. Works like stone pitched contour bund, earthen bund, columns bunds moisture conservation pits etc are proposed to reduce run off and to lessen soil erosion check dams, agro forestry, etc are also proposed.

The following table shows the details of water harvesting structures constructed during the project time.

*Table 8: Existing water harvesting structures*

Sl No.	Structures	Quantity
1	Dug Out Pond	2645 Nos
2	Stone Pitched Contour Bund	1519 M <sup>2</sup>
3	Earthen Bund	16411 M
4	Column Bund	53210 M

In agricultural lands, contour bunding is the most widely practiced soil conservation measure for mildly sloping lands. Contour bunds are designed as mini-earthen dams with emphasis on height of bund and cross – sectional areas depending on texture and depth of the soil. The contour cultivation – a supporting practice, is effective on land with very gentle slopes. This not only reduces the soil loss but also helps in increasing soil productivity.

Bunds – small earthen barriers are provided in agricultural lands with slopes ranging from 1 to 6 percent. They control the effective length of slope and thereby reduce the gain in velocity of runoff flow to avoid rill and gully formations.

**5.2.1 Farm Production System:** Under this, the major thrust is for diversification of production system, adoption of proven technology and popularization innovative technology.

For diversification of production system, large numbers of planting material of diverse crops are distributed to the watershed community. Also agricultural nurseries are established to produce the planning

materials required for the watershed. Vegetable unit, medicinal plant unit, etc, are also included.

Provision is also given for the adoption of proven technologies like vermin compost and also for the popularization of innovative technologies.

**5.2.2 Livelihood Support System:** This is meant for landless and for those owing below 50 cents of land i.e., for the weaker section of the watershed community. The benefit of this item is route through Self Help Groups (SHG).

The idea of this system is to provide a sustainable earning for the livelihood of the weaker section by establishing self employment entrepreneurships like cattle rearing, apiary, food processing, paper/cloth bag making etc.

## **6. Conclusion**

Implementation of NWD PARA project has made changes in all walks of life among watershed community. The positive changes brought out by the scheme are appended below:

- a. Watershed Community has empowered to take up developmental activities managed by farmers.
- b. Project could create awareness on the importance of water conservation and ground water recharge during rainy season.
- c. Farmers become more aware about their land- soil, fertility, productivity and crops suited for the area.
- d. Adoption of Mixed Farming Technique has strengthened the sustainability of Agriculture.
- e. Project helped farmers to earn more income from farming by adopting Low Agriculture Input System Approach (LAISA)
- f. Project has created 'we feeling' among Watershed Community by formation of SHGs and UGs and empowered the rural folks to take up group activities.
- g. Since 84.5% of the project amount is spent from the Watershed Committee's account. Watershed Committee had shown keen interest in identifying and organizing the community to execute the programme. The paid secretary and volunteer posted in the project made easy for the farmer representatives to watch the accounts and office records up to date. This not only gave transparency for implementation but also helped in monitoring and evaluation of activities. This also helped in familiarization of office procedure to rural folks. Auditing of accounts by Chartered Accountant made easy. Internal audit by Department also found satisfactory.

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- h. Many farmers in the watershed area said that this project has enlightened them about the collection of rainwater and it enhanced infiltration into lower strata of earth surface so as to improve ground water level. Small structures like earthen bunds, loose boulder structures, pits and trenches constructed with financial assistance of the project have helped a lot for improving ground water level in the area. It is absorbed that 0.5 to 1.5M increase in water level of wells in the treated area during summer months. Water availability during summer season has lead to cultivation of summer vegetables and availability of fodder during lean season.

*Table 9: Improvement in Water level*

<b>Pre project</b>	<b>Post project</b>
Monsoon- 3 M	Monsoon – 3 M
Summer – 5 M	Summer - 3.9 M

- i. NWDPRRA project has given more thrust in the management of Natural Resources. Soil testing with the help of mobile soil testing services available in the District was utilized in the project area at the beginning stage of watershed programme. This helped farmer to understand the fertility status of their land. Wormy compost unit started with the financial assistance of the scheme has promoted the use of organic manure application in the watershed area. Production of biogas in the area also improved the organic
- j. Matter level in the soil. The demonstration in paddy cultivation in 10Ha area with the package of practices recommended by Agriculture University shown two-fold increase in the productivity of rice in the project area. This helped other farmers in the adjacent areas to bring additional area under paddy cultivation.
- k. Farm Production System has given in the project as a major component. This has helped rural farmers to take up allied agricultural activity by utilizing Revolving Fund. Various skill development training imparted to farmers created awareness on possibilities of goat rearing, honey extraction, cattle rearing, poultry, wormy composting, azolla cultivation and promoted cultivation of rare medicinal plants in their plots. This has opened source of alternative income to farmers, which will support them during the calamities of nature and price fall.

**Table.10: Changes in Cattle population**

Sl.No.		-Before implementation	After implementation
1	Cow	420	510
2	Oxe	10	10
3	Poultry	490	660
4	Pig	15	15
5	Goat	100	170
6	Others	10	20

- l. While improving the quality of soil and ground water regime production of crops like coconut, cashew, banana and paddy have shown considerable increase. Also improvement in the vegetation has increased fodder availability. Promotion of dairy sector has increased milk production and average income of rural poor has risen up to 50% on completion of the project.
- m. Community organizers role in the watershed has helped the Watershed Community in organizing Self Help Groups and User Groups even though most of the groups were initially formed with the intention for availing Revolving Fund from the projects. At the end of project these groups have collected considerable amount of thrift and began to take up some group activities/enterprises. This also helped them to boost their confidence to take up income generating enterprises.

**Table 11: Muzhakkunnu micro watershed**

Productivity enhancement of major crops:	Pre-project	Post-project
Paddy	2170	2365
Rubber	2630	2945
Cashew	1150	1230
Arecanut	898	942
Coconut	4840	5130
Pepper	167	175
Banana	10000	10800
Tapioca	5000	5200

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*Table 12: Kavumpady micro watershed*

<b>Productivity enhancement of major crops:</b>	<b>Pre-project</b>	<b>Post-project</b>
Paddy	2170	2365
Rubber	2630	2945
Cashew	1150	1208
Arecanut	898	987
Coconut	4830	5236
Pepper	167	175
Banana	10000	10680
Tapioca	5000	5265

*Table 13: Alayad micro watershed*

<b>Productivity enhancement of major crops:</b>	<b>Pre-project</b>	<b>Postproject</b>
Paddy	2170	2213
Rubber	2630	2827
Arecanut	1150	1210
Coconut	4850	5286
Pepper	167	175
Banana	10000	10800
Tapioca	5000	5250

*Table 14: Thillankery microwatershed*

<b>Productivity enhancement of major crops:</b>	<b>Preproject</b>	<b>Post project</b>
Paddy	2710	3000
Rubber	2630	2762
Cashew	1150	1400
Arecanut	900	950
Coconut	4830	5034
Pepper	167	180
Banana	10000	10420

*Table 15: Padikkachal micro watershed*

<b>Productivity enhancement of major crops:</b>	<b>Pre-project</b>	<b>Post-project</b>
Paddy	2170	3255
Rubber	2630	2762
Cashew	1150	1208
Arecanut	890	979
Coconut	4838	5709
Pepper	164	190
Banana	10000	11200
Tapioca	5000	5500

*Table 16: Punnad-I micro watershed*

<b>Productivity enhancement of major crops:</b>	<b>Pre-project</b>	<b>Postproject</b>
Paddy	2170	2590
Cashew	1150	1490
Arecanut	898	940
Coconut	4830	5420
Pepper	164	175
Banana	10000	11300
Tapioca	5000	5200

*Table 17: Punnad-II micro watershed*

<b>Productivity enhancement of major crops:</b>	<b>Pre-project</b>	<b>Post-project</b>
Paddy	2350	2468
Rubber	3360	3503
Cashew	1270	1320
Arecanut	890	960
Coconut	4300	5210
Pepper	171	192
Banana	10000	10350
Tapioca	5000	5100

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*Table.18: Productivity enhancement of major crops*

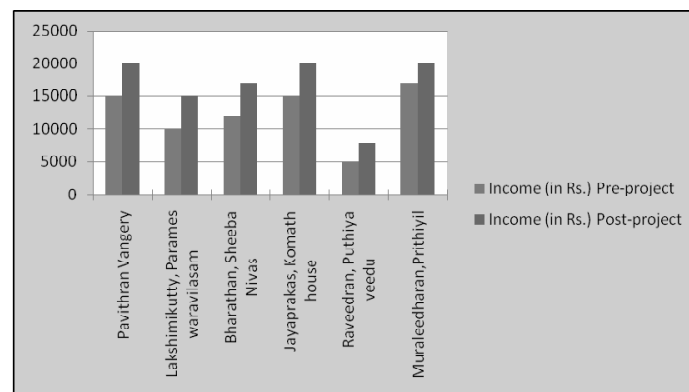
Crop	Pre-project	Post-project
Paddy	15910	18256
Rubber	16510	17744
Cashew	7020	7856
Arecanut	6524	6968
Coconut	33318	37025
Pepper	1167	1262
Banana	70000	75550
Tapioca	30000	31515

### 6.2 Socio Economic Status

The Project has helped the farmers to earn more income from farming by adopting Low Agriculture Input System Approach (LAISA).

*Table.19*

Name	Income(in Rs.)	
	Pre-project	Post-project
Pavithran Vangery	15000	20000
Lakshimikutty, Parameswaravilasam	10000	15000
Bharathan, Sheeba Nivas	12000	17000
Jayaprakas, Komath house	15000	20000
Raveedran, Puthiyaveedu	5000	8000
Muraleedharan, Prithiyil	17000	20000



*Fig. 22: Bar Chart*

### **6.3 Beneficiaries**

4646 Households were benefited by the scheme.

*Table.20*

<b>Sl. No</b>	<b>Micro watershed</b>	<b>Beneficiaries (No. of Households)</b>
1	Kavumpady	511
2	Padikkachal	881
3	Punnad I	535
4	Punnad II	862
5	Thillankery	419
6	Muzhakkunnu	819
7	Alayad	619
<b>Total</b>		<b>4646</b>

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# Educational Qualification for Political Leaders: An Interpretation

Dr. Sanjukta Maharana

## Introduction

To begin with great political thinker Plato, political power must be placed in those hands who are man of knowledge and intellect. He also remarked that-unless political greatness and wisdom are united, cities will never cease from socio-political evils. Although Plato gave this view in the 5th century B.C. it holds its relevance even at the 21st century.

The constitution of India does not provide any educational qualification for a person to contest election to the legislature. However for the smooth functioning of a democratic government like ours, minimum educational qualification for the member of legislature-central or state is essential, since proper enactment as well implementation of rules and laws requires a sound educational background.

The plans and policies of government are made by the cabinet or political executive with the consent of legislature. These policies are to be implemented by the administrators or bureaucrats and these are called permanent executive. They come in direct contact with the people on the basis of information provided by bureaucrats; the ministers take decisions (Fadia and Fadia 2012: 499).

Political executive and permanent executive are two important component of government. Bureaucrats or Civil Servants are permanent executives, have fixed tenure, impersonality, hierarchical, political neutrality, appointed by merit and has proper promotion system. They are the generalist. They work for rapid socio-economic

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development of the society by providing social services to the people. They are vested to implement the rules and regulation in the social field like health, education, and in the economic field, work for development of infrastructure like electricity, roads, work for development of agriculture, industry and so on.

Political executive are not permanent and represents the party which is in power. They are elected by the people by means of Universal adult franchise. Bureaucrats are permanent and paid officers. It advises the government on the matter of making plans and implement them.

The rules and regulations are made by cabinet and permanent executive implement them. In these circumstances, if the political executives are not in a position to understand the rules and regulation frequent conflict would emerge. In the contemporary period, the world is changing day by day. To cope with the present world situation education and training are necessary to understand the need of people. By the help of information and communication technology one can improve themselves and increase their educational standard. So though the politicians occupy the highest position in the country, they are needed to equip themselves in the changing world and make them competent.

Without proper education the people are not in a position to acquire proper information. Not only education would be helpful to create a good leader but also provides the person the qualities of leadership. There is need of politician to know history, geography, polity, economy, law of the country. So that they are able to raise right and valuable questions in the legislature and passed laws which are helpful for the society.

We know what has happened during the passing of Lok pal bill, Telengana bill in the parliament. The politicians should understand the real need of society, gravity of problems, and work for the benefit of the society. Many people before independence fought and sacrificed their life and acquired freedom which we are tasting now. However we are not in a position to maintain the freedom by giving place to corruption in politics and society. This is primarily due to our ignorance caused by inadequate and lack of proper education. Apart from education, own consciousness is necessary to maintain the morality of society.

At present the minimum qualification for a permanent executive is bachelor degree. They are entrusted with the function of implementation of the rules and regulations formulated by the political

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executives or legislators. As large number of legislators in our country has no education background how they can understand the actual problems of the society since education is the medium for proper understanding of societal problems in a changing world. World is changing in a rapid speed, new innovation in science, arts, culture are being made. People's demands and aspirations are also increasing. Therefore proper enactment of laws, and public policies is a must to cope with the changing situation which requires a sound educational background for those who are involved in the process of policy formulation. Therefore to make good laws, balance budget, educational qualification is necessary.

J. S. Mill a great English political philosopher “strongly felt the need of wise, educated and enlightened legislator –cultured men who had made a special study of politics, who understand the meaning of legislation, whose opinion will be independent and whose actions will be above any selfish consideration”(Singh 2010: 45). Not only had this, Mill also prescribed educational qualifications for voters. To him universal suffrage must be preceded by universal education.

### **Counter View**

Large section of population of India is illiterate. So fixing the qualification mean depriving a large section of society from contesting election and this leads to deprivation of right to equality.

Politicians at present are not totally uneducated rather we have plenty of well educated politicians in our country (India). In spite of these, the country is facing 2G scam, Coal scam, common wealth scam, buffer scam caused by some front ranking politicians. So honesty, integrity, is necessary to run the country in a proper direction and this could be achieved only through moral education and not through mechanical or professional education although the letters are highly important for the material development of a society. There are various leaders in the world history, they do not have education, still they are by their honesty, integrity and leadership qualities proved themselves as amazing leaders. This is true in case of Abraham Lincoln. Bill Gates, Henry Ford, Albert Einstein who did not have educational qualification still they turned themselves as great leaders of the world.

### **Conclusion**

Highly educated bureaucrats have to work under the politicians. So to ensure proper coordination in their working with the bureaucrats, educational qualification for politicians is necessary. Political executive

should not become hindrances in the way of permanent executive. To understand the real need of the society minimum educational qualification should be provided by the constitution to contest in the election. It would be correct to conclude that the government has been implementing various rules and regulations to eradicate the illiteracy. But if the politicians and legislatures are illiterate, the government's attempt of making the society literate will be value less. Proper education creates dedication to duties and dedicated, educated politicians would provide corruption free, reliable and stable democracy since the chief objective of education is, along with others, the motivation of behavior and building of character.

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# Post-structuralism and Return to Philosophy

Vijay Prasad

The post-structuralism mainly deals with history as a privileged site to understand and articulate the relationship between philosophy and the Human Sciences. Epistemology as the precursor to philosophy, represents the study of mental representations, which arose in a particular historical epoch, the seventeenth century; developed in a specific society, that of Europe. However, this return to philosophy was not by chance. It actually shows the desire for a theory of knowledge, a desire to find 'foundations' to which one might stick to, frameworks beyond which one must not move away, objects which impose themselves, representations which cannot be denied or contradicted. Michel Foucault portrays our obsession with epistemology as an accidental, but eventually sterile, turning in western culture. In his "*Prose of the World*" (Ch. 02, Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*), Foucault shows why was there mixture of rationality, magical practices and cultural heritage (from Greek and Roman period) in the 16<sup>th</sup>-17<sup>th</sup> century epistemological knowledge of Europe where worldview won over facts.

Here, Foucault proposes that like history of science (mathematics, cosmology and physics), economics and social sciences, those are mainly based upon the empirical knowledge, did possess a reason, a well-defined regularity. They obeyed the laws of certain code of knowledge. They had itself a system. He uses the comparative methods, in which he relates the knowledge of social sciences, the knowledge of laws of language and the knowledge of economic facts to the philosophical discourse that was contemporary during 17<sup>th</sup>-19<sup>th</sup> century. The natural philosophers, economists and grammarians employed the same rules to define the objects proper to their own study, to form their concepts,

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to build their theories. He further shows when a certain change occurred in a particular discipline, other disciplines very suddenly and thoroughly reorganized themselves, but he apparently shows his inability to explain the causes of these changes.

However, the main crux of Foucault's argument is that in order to read the 16<sup>th</sup>-17<sup>th</sup> century documents, correctly, we need to, first of all, study the history of knowledge itself and need to get a sense of how the Middle Age philosophers and common people thought, because the relationship between writing and thinking keeps changing over a period of time. Many moods operate in that one kind of reading and writing. So, it's way of thinking about archives. We see that up to the end of 16<sup>th</sup> century *resemblance* played a very constructive role in the knowledge of western culture. This resemblance had various kinds of forms and constituents, e.g. *convenience*, *emulation*, *analogy* and *sympathies*. We see, things which are sufficiently close to one another to be in juxtaposition are '*convenient*' to perceive. In this way, movement influences, passions and properties of two things are communicated. So, here we tend to perceive things according to our convenience by comparing them to each other. Similarly, when things are not in close proximation and distant from each other, here the relation of *emulation* enables things to imitate one another from one end of the universe to the other without connection, by duplicating itself in the mirror of nature. But, when things are in endless numbers in a single given point (like stars in sky, plants on earth), the relationship between the two are determined by *analogy*. In order to explain the assimilation of things with similar nature together, resemblance of '*sympathies*' can be said to be at work. It draws things towards one another in an exterior and visible movement, which also gives rise to a hidden interior movement — a displacement of qualities that take over from one another in a series of relays. We can explain it by a simple example: fire, because it is warm and light, rises up into the air, towards which its flames untiringly strives, but in doing so it loses its dryness and so acquires humidity: it disappears therefore into light vapour, into blue smoke, into clouds: it has become air. So, the sympathy has the power of assimilating of rendering things identical to one another, of mingling them, of causing their individuality to disappear. It transforms things, but in the direction of identity.

So, it is clear that these resemblances have long been prepared by the order of the world for our greater benefit. But, making the point little bit complicated, we should acknowledge the fact that resemblance are itself not a visible form. Actually, the knowledge of resemblance of

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things is founded upon the unearthing and decipherment of *signature*. Through this signature, the invisible form of a thing will be brought into the light. So, if we say that aconite is beneficial for our eyes, then the question arises how did we come to know this? Because seeds of aconite bears the sign of eyelids. Similarly walnut is exactly like the brain in appearance which is good for pain in head. So, in 16<sup>th</sup>-17<sup>th</sup> century worldview, everything would be manifested and immediately knowledge able if the *hermeneutics* of resemblance and the *semiology* of signature coincided. So, we see, in such type of *episteme*, where signs and resemblance were wrapped around one another, it was essential that the relation of *microcosm* and *macrocosm* should be conceived as both the guarantee of the knowledge and the limit of its expansion. Further, it was in the context of this necessity, we can explain the mixture of rational knowledge, magical practices and cultural heritage from Antiquity (renewed during Renaissance) in the sixteenth- century learning. So, on the one hand we find awakened awareness of sovereign rationality in which one recognizes himself, but on the other hand, we also find belief in supernatural power and in Antiquity, but, it can't be termed as insufficiency of the 16<sup>th</sup> century knowledge structure, but was actually the requirement of the age, where the knowledge was acquired through decipherment of signs, which revealed resemblance and affinities. So, it was embedded in the configuration of the knowledge itself, where it was widely believed that those visible marks have been stamped upon the surface of the earth by God. So, "Divination was not a rival form of knowledge; it was part of the main body of knowledge itself."

This kind of mixture of belief and fiction in the epistemological knowledge was reflected in the works of contemporary philosophers. By the same token, the value of language laid in the fact that it was the sign of things. It was believed that the sages of Antiquity have set down in scriptures, the legible word to decipher. The relation to these texts is of the same nature as the relation to things, in both cases here are the signs that must be discovered. Things make sense only in the natural atmosphere in which they reside, similarly letters and syllables make sense when arranged in a particular word (etymology) and sentence (syntax). We see, the study of grammar in 16<sup>th</sup> century was based upon the same epistemological arrangement as the science of nature. The only difference is that there is only one nature and there are several languages. In its original form, as it was believed, when it was given to men by God, language was absolutely certain and transparent sign of things, because it resembled them. The names of

things were lodged in the things they designated. Just as strength is written in the body of the lion, regality in the eye of eagle, just as the influence of the planets is marked upon the brows of men. However, by the form of similitude language became separated and incompatible with one another only in so far as they had previously lost this original resemblance to the things that had been the prime reason for the existence of language.

So, here, Foucault points out that while using medieval archives, we must be aware of the fact that their tools of analysis were different from ours. There was still interplay of belief, fiction in the configuration of epistemological knowledge, where worldview wins over facts. Theological tool played major role in the whole articulation of facts. This kind of epistemological enquiry can also be found in the discussions of Reinhardt Koselleck, who has never been called a “post-structuralist”, nonetheless shares with Michel Foucault a certain philosophical heritage. He also deals with the human consciousness and shows how the consciousness of ‘being human’ was accompanied with the consciousness of “sub-human” and “super-human” which legitimized the prevalence of slavery and oppression of barbarians during the Antiquity. Similarly, in his “Modernity and the Planes of Historicity” (in his *Futures Past: On the Semantics of Historical Time*, Columbia University Press, New York, 1985), Koselleck shows how in 16<sup>th</sup> century Europe, the present and the past were enclosed within a common historical plane. There was no vision of future, because the notion of time was determined by the Christian notion of expectation of the End of World (Epcalypso). Even, the Reformation as a movement of religious renewal under Martin Luther, carried with it all the signs of the End of the World, where according to God’s will, the Final Judgement was imminent, that the world was about to end. So, proclaiming a vision of the future presupposed that it had first received the authorization of the church. The stability of the church was not to be endangered. It’s unity, like the existence of the empire itself was a guarantee of order until the end of the world came. It was only, when religion was restricted and neutralized politically, then it disclosed a new and unorthodox future, when the End of World was postponed for later period, when the astronomical and mathematical calculation of future pushed eschatological expectation into future, the Holy Roman Empire was stripped of its sacred task. The preservation of peace became the business of the European system of state. The whole notion

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of sovereign state came into being. Now, the acceleration of time became a human task presaging an epoch of freedom and happiness, the golden future.

Similarly, as Koselleck shows in the “Eighteenth Century as the Beginning of Modernity” (in his *The Practice of Conceptual History: Timing History, Spacing Concepts*) how the concept of ‘modernity’ arose out of the formation of the concept of the ‘Middle Ages’ and ‘Antiquity’. Modern seeks to conceptually grasp what previously was not at all possible: something absolutely new. So, the whole notion of modernity was not only conceptualized retrospectively, but also in terms of an ‘open future’ in which it was expected new things would continue to come about. At the end of 18th century for the first time, the concept of ‘progress’ and ‘development’ was conceived as a category of universal history. Both concepts also contained anticipations of a changeable future. The century of Enlightenment was reflected as such by its contemporaries, and with awareness that it was qualitatively different from all preceding centuries. This is linked to the Foucault’s notion of Enlightenment. Modernity, itself proves to be a period of *transition*, we may reflect and work on its tempo and duration, its economic, political, social and cultural conditions, but its end continues to remain open. So, there are certain ways in which present, past and future are fled.

So, here, as Foucault consciously and Reinhardt unconsciously try to make us understand that while making an enquiry into the ancient and medieval thinking, one needs to acknowledge the diversity of analytical tools, styles of reasoning, methods and objects, which developed over a period of time. Because of these different analytical tools, ancient and medieval thinkers, frequently got things right, solved problems and established ‘truths’. So, we should not search for a unified realm of ‘truth’, rather should keep our options in enquiry as open as possible. What is statistics, for modern scholars, was experimental methods for medieval thinkers and geometry for the Greeks. The fact that Greeks had no concept or use of statistics doesn’t mean that it invalidates Greek science, neither statistics as such. So, here Foucault treats the problem of correct representation, specific to the history of ideas, as a general cultural concern. He analyzes thought as a public and social practice. It is linked to the wide range of disparate, but interrelated social and political practices that constitute the modern world with its distinctive concerns with order, truth and the subject.

So, in one way Foucault propagates for inter-disciplinarity, but ends up privileging philosophy, which for him, provides a 'theory of knowledge', which was distinct from sciences, because it was their foundation. Now, philosophy's main task becomes to comment on other disciplines, and to legitimize their claims to knowledge.

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# A Study of Aggression Among People

Sunil Kumar Singh

## Abstract

A study was made on a sample of 200 villagers of Chapra District. Their age range was 20 to 30 years. They were randomly selected. There were 100 Hindu villagers and 100 Muslim villagers. The sample was drawn from rural and urban areas. Aggression Questionnaire was used to measure the aggression level of the students, which was developed by Pati in 1976. Higher score denotes higher aggression level and lower score denotes lower level of aggression. In this study, it was found that Muslim villagers were more aggressive than Hindu villagers and on the other hand, rural villagers were less aggressive as compare to their urban counterparts.

## Introduction

A comparative study of different societies and cultures shows that aggression develops in the family and in the society where one lives and it differs according to the variation in culture. Aggression is undoubtedly a negative emotion and though, we don't like it, it is an important part of human experience. In every family aggression is expressed by its members in some form or other which the baby sees, observes and experiences. While in some families it is experienced in a lesser degree, in other families it may be experienced daily. Hence experience or expression of aggression is a normal affair and everybody experiences it, some more some less and some modestly.

Coming to the cultural influences on aggression the brilliant studies of Marget Mead and Ruth Benedict and other anthropologists suggest that in certain societies evidence of aggression is lacking. The Arapesh and New Guinea Tribes are calm and quiet, peace loving, cooperative

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and submissive. Life is easy for them to pass perhaps because their frustrations are less or they have been taught to tolerate their frustration, or handle them in non-aggressive ways. The Mondugamor Tribe on the other hand is over aggressive, hostile, fierce, war like and uncooperative perhaps because they have been frustrated in the basic need of food and love and they have also been taught simultaneously to handle their frustrations in an intolerant and aggressive manner. Anthropologist Kluckhonn opines that aggressiveness is a matter of depending upon cultural variation and the nature of free floating aggression depends upon this. The importance of culture in the development of aggression is thus evident from the above analysis of different cultures.

It is said that there is some tinge of aggression in birth cry. Crying is never considered as a positive or pleasant reaction. After birth when the new borns cry because of cold or hot environment, because of hunger pangs, it indicates anger and fear. But before six months this cannot be clearly differentiated. At the age of 8-9 months usually the child learns to show fear to strangers and at this age he starts becoming aware of various sources of threat and expresses his aggression in crying, in showing temper tantrum, in throwing things here and there, in pinching, in tearing and etc. when children grow up, see the violent acts of their parents, like quarreling, hitting each other, name calling etc. they also imitate the same. Also when they hear stories of violence and see violent serials in television, particularly in cartoon network and in films, they learn and imitate it. Examples are many, where perhaps in every family children start fighting after viewing a fighting picture or a fighting serial like Phantom or Spiderman.

Gradually when children grow up and mix with the outside environment and consequently find that many of their needs are not fulfilled, they show signs of aggressive behavior which they have learnt from various social situations. It is said that aggressive behavior is more an outcome of social learning and observational learning which we will discuss later on. The way a child aggresses depends upon what he imitates from his role model like his parents, family members, peers and teachers.

In a study by Ames (1966) on upper middle class children it was demonstrated that the fantasy theme of violence dominated the stories they were told right from the age of two and continued to be so till they were five. Violence and aggression increase with the increase of age and it is found that anger as an emotion is experienced by the child next to fear which has the highest frequency in the child's emotional

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life. The more frustrating situations the child experiences daily in his environment, the more is the scope of violence. The child also learns a lot of aggressive behavior from his parents, relations, neighbours and in laws.

Aggression is a negative emotion and though we don't like it, it is an important part of human experience. "Aggressive behaviours are actions that are intended to cause injury and anxiety to others including hitting, kicking, destroying property, quarreling, derogating others, attacking others verbally and resisting requests". (Mussen, Conger and Kanga, 1969).

Miller Donald (1939) and others of the Yale Group view that aggression is always a consequence of frustration. In their classic book "Frustration – Aggression" they hold that aggression is always a consequence of frustration. But further studies show that though aggression is one of the important reactions to frustration, it is not only one. Even sometimes with frustration of a mirror nature considerable aggression takes place. Thus various studies in the area of human aggression do suggest that aggressive behaviour is not an automatic outcome of the interaction of frustration and aggression. It is obvious from various studies that learning, past experience, cognition and various environmental factors are responsible for the aggression behaviour. The literal meaning of aggression is to quarrel, to attack and to offend.

### **Objective**

The objective of this study is to see the effect of caste and community on the attitude towards aggression.

### **Hypothesis**

Following hypotheses were formulated on the basis of above mentioned objective.

1. There will be significant effect of community on the attitude of the people towards aggression.
2. There will be effect of residential area on the attitude of the people towards aggression.
3. There will be significant difference between Hindu and Muslim regarding aggression.
4. There will be significant difference between rural and urban people regarding aggression.

**Method**

**Sample:** The study was made on a sample of 200 people who were living in the different villages of Chapra District. There were 100 Hindu people and 100 Muslim people. The sample consisted of 50 rural and 50 urban people.

**Tests Used:** The Aggression Questionnaire was used to measure the aggression level of the people who belonged to Muslim Community, Hindu Community, rural area and urban area. The Questionnaire was used which was developed by Pati G. C. in 1976. Higher score denotes higher level of aggression and lower score denotes lower level of aggression.

**Statistical Analysis:** The obtained data has been put to suitable statistical analysis. Mean, SD and T-ratio have been computed to test the significance of difference between score of groups.

*Table: Showing The Mean, SD And T-ratio of Attitude Towards Aggression*

Group	No	Mean	SD	T-Ratio	df	Level of Significance
Hindu	100	168	25.886482	4.2246235	198	0.01
Muslim	100	183	24.646297			
Hindu-R	50	160	24.185946	3.2944801	98	0.01
Hindu-U	50	176	24.980792			
Muslim-R	50	178	20.015195	2.584384	98	0.05
Muslim-U	50	189	23.130931			

It is very easy to say that our hypotheses are verified. On the basis of obtained data, it can be said that aggression is an universal phenomenon which may be present in every section of our life. Here we find that the mean score of Hindu People is 168.00 and the mean score of Muslim People is 183.00. The T-ratio to test the significance of

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difference between these two means is 4.2246235 which is higher than the required value at 0.01 level. So, it can be said that Hindu People are less aggressive as compare to Muslim People.

Secondly, we see that mean score of Hindu Urban People is 176.00 whereas mean score of Hindu Rural people is 160 and the T-ratio to test the significance of difference between these two means is 3.2944801 which is higher than the required value at 0.01 level. So, easily it can be said that Hindu Rural People are less prone to aggression as compare to their Hindu Urban counterparts.

In the last, we see that the mean score of Muslim Rural People is 178 whereas the mean score of Muslim Urban People is 189 and the T-ratio to test the significance of difference between these two means is 2.584384 which is higher than the required value at 0.05 level. So, it can be concluded that Muslim Rural People are less in favour of aggressive behaviour as compare to Muslim Rural People.

### Results And Discussion

On the basis of above mentioned study, it can be concluded that:

- There is a significant effect of caste and community on the attitude towards aggression.
- There is a significant effect of residential area on the attitude towards aggression.

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# Socio-economic Correlates of Selective Morbidity among Children under Five Years of Age in Uttar Pradesh

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J.V.Singh, \*\*\*Prof. V.K.Tiwari and \*\*\*\*Dr.  
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## Abstracts

Diarrhoea, Acute respiratory infections and malnutrition globally identified as posing major threats to survival of children under the age of five. This is also true for India, where these diseases have been the major causes behind infant mortality. Prevention as well as effective treatment of these diseases depends on a host of individual, household and community level socio-economic factors. The present paper is on to know the morbidity pattern among under five children in Uttar Pradesh and to find out various socio-demographic correlates associated with Diarrhea, ARI, and Malnutrition among of under 5 children in Uttar Pradesh. This study was conducted in randomly selected sixteen (16) villages of Uttar Pradesh. Twenty mothers in the age group 15-45 years with minimum one or two living children from each village were

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selected. A total of three hundred and twenty mothers from sixteen villages were selected and included in the study by total interview method. *Conclusion:* The present study reveals that high incidence of infant/child morbidity has been found among the younger aged mothers. Infant/child morbidity is high among the mothers who conceived children before 21 years of age. Morbidity of children has been increasing with the increase in the number of surviving/live births. In Uttar Pradesh, type of house has been found to be an important determinant in influencing the incidence of infant/child morbidity. Illiterate mothers had high incidence of infant/child morbidity, when compared to educated mothers. Children, in joint and extended families, had higher morbidity than children belonging to nuclear families. Further, children born to mothers who had blood related marriages, seems to have more morbidity and also children belonging to SC/ST seems to have high morbidity. Mothers, who came from high socio-economic status, had less incidence of infant/child morbidity.

**Key Words:** Morbidity; Under 5 Children; Socio-economic status, infant/child, Diarrhoea, ARI, Malnutrition.

### Introduction

The Millennium Development Goals have taken into consideration the socio-economic, health and development conditions in three of the eight goals and makes an acknowledged contribution to achievement of other goals (WHO, 2005). The MDGs reflect the notion that the socio-economic development of the area affects the community, which in turn affect health. The public health specialists have been giving growing attention to the bio-social determinants of health<sup>13,14</sup>. The social determinants of the health are the conditions in which people live, grow, work and age, including health care delivery system prevailing in the society<sup>1,2</sup> (Raphael, 2008) and also the biological factors.

The study of morbidity patterns of an area given a clear understanding about the health situation in that area. The pattern of mortality and morbidity varies from region to region in India. Children under five years of age constitute approximately 15% of the country's total population and are the most vulnerable section or high risk group of the society and suffer from highest morbidity<sup>3</sup>. The risk is connected with growth, development and survival. First five years are full of health hazards. Since they are high risk group, under five children are exposed to many environmental factors leading to diseases in children. In India, NFHS has established that a linkage between morbidity and social determinants exists. The assessment of health status of under five

reflects the health condition of a nation. It also helps in obtaining base line data for planning, interventions, follow up and evaluation of health services, provided to these children.

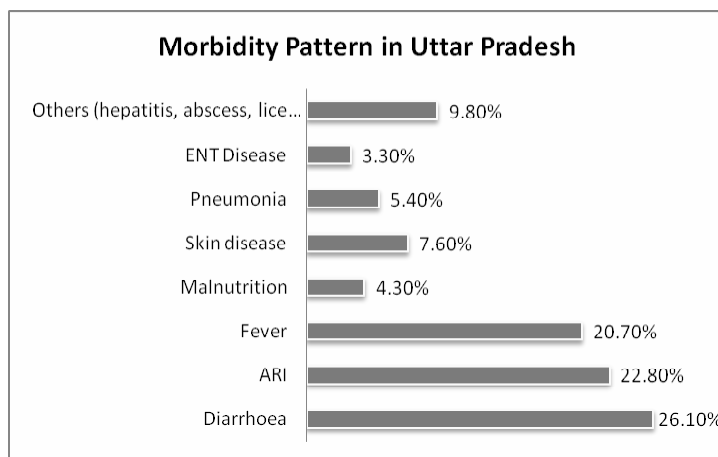
Keeping in view the above facts, this cross sectional study was carried out to identify the determinants of morbidity in Uttar Pradesh. This will be useful for the planning of health facilities. The present study is planned accordingly in sixteen villages of four Primary Health Centre areas of Uttar Pradesh.

### **Aims & Objectives**

1. To study the morbidity pattern among under-5 children in rural areas of Uttar Pradesh.
2. To identify various socio-economic correlates associated with selective morbidity i.e. Diarrhea, ARI, and Malnutrition.

**Material and Methods:** The present study was conducted in sixteen villages of four Primary Health Centre areas of Uttar Pradesh. Interview of 20 mothers from each selected village in age group of 15-45 years with minimum one or two living children was conducted. Hence total 320 mothers in age group of 15-45 years with minimum one or two living children were interviewed. Based on review literature common disease were listed and questions were designed based on sign and symptoms of the selective diseases to come out on conclusion about the specific diseases. For this purpose semi-structured and pre-tested interview schedule was used for the Mothers in age group of 15-45 years with minimum one or two living children.

**Results and Discussion:** Socio-economic and demographic variables are believed to have a decisive influence on morbidity of the people belonging to different settings. Historically, socio-economic status showed an inverse relationship with morbidity. The findings of the study by Rahul Prakash, et al, 2004 seems to suggest that, although both medical and non-medical factors contributed to the change in morbidity pattern<sup>4</sup>, the role of the factors of socio-economic nature also were found to be significant. The implication has been, without socio-economic epidemiology, biomedical epidemiology could make a limited contribution to the reduction of morbidity. There exists an inverse relationship between the infant mortality and socio-economic development<sup>5</sup> (Mazen Abuqamar et al 2011, Sohler et al. 2003; Mansfield et al. 1999; Szwarcwald et al. 2002; Villanueva & Garcia 2000; Bennett 1999; Stainstreet et al. 1999). The morbidity pattern in Uttar Pradesh is shown below in chart.



The Demographic and socio-economic variables examined in the present paper are: Mother’s age, age at first conception, number of surviving children, family size, type of house, ventilation, caste, education of the mother, occupation of the father, type of family, type of relationship before marriage, annual income of the family, and socio-economic status index.

**Mother’s Age:** In the sample population, most mothers belong to 21-29 years age group. Mothers below 20 years constituted one-fifth of the total mothers. Nearly one-third each, of mothers, belong to 21-24 years. The mean age of mothers for total sample is 25.04 years. The correlation between mother’s age and the incidence of under five child morbidity has shown high incidence of under five child morbidity (Diarrhea: 30.16 percent; ARI: 26.98 percent and Malnutrition: 4.76 percent) among the mothers of younger age groups (less than or equal to 20 years). Morbidity is coming down at 21-24 years (Diarrhea: 25.44 percent; ARI: 21.05 percent and Malnutrition: 4.39 percent) and again a rise in morbidity has notice with increase in age of the mothers {25-29 years: (Diarrhea: 25.24 percent; ARI: 23.30 percent and Malnutrition: 3.88 percent); 30+ years: (Diarrhea: 30.00 percent; ARI: 22.5 percent and Malnutrition: 5.00 percent)}. High incidence of morbidity among younger mothers may be due to lack of experience of child rearing practices, illiteracy and dependence on elders. Increased morbidity among older mothers may be due to lack of time for feeding and care of children due to large families heavy household chores and so on. Sometimes older children may help younger children out of affection. But, due to unhygienic practices of elder children, younger children may contract some infections and communicable diseases.

**Table 1: Percentage distribution of age of respondents, age at first conceptions, surviving children, family size and Type of house in relation to infant/child selective morbidity of Uttar Pradesh:**

Mothers age (in years)	Diarrhea	ARI	Malnutrition	Total (DP+DA)
	DP	DP	DP	
Less than 20	30.16(19)	26.98(17)	4.76(3)	100.00(63)
21-24	25.44(29)	21.05(24)	4.39(5)	100.00(114)
25-29	25.24(26)	23.30(24)	3.88(4)	100.00(103)
30 +	30.00(12)	22.5(9)	5.00(2)	100.00(40)
<b>Age at first conception (in years)</b>				
Less than 17	25.00(46)	21.20(39)	4.89(9)	100.00 (184)
18-21	31.00(31)	29.00(29)	4.00(4)	100.00 (100)
22-24	25.93(7)	18.59(5)	3.70(1)	100.00 (27)
25 +	22.22(2)	11.11(1)	0.00(0)	100.00 (9)
<b>Surviving Children</b>				
1	26.21(27)	21.36(22)	3.88 (4)	100.00(103)
2	26.05(31)	23.53(28)	3.36(4)	100.00(119)
3 +	28.57(28)	24.49(24)	6.12(6)	100.00(98)
<b>Family Size</b>				
Less than 3	25.42(15)	20.34(12)	3.39(2)	100.00(59)
4-5	27.22(46)	23.08(39)	4.14(7)	100.00(169)
6 +	27.17(25)	25.00(23)	5.43(5)	100.00(92)
<b>Type of House</b>				
Hut	26.94(52)	24.35(47)	4.15(8)	100.00(193)
Kutchha	33.33(9)	22.22(6)	3.70(1)	100.00(27)
Pucca	25.00(25)	21.00(21)	5.00(5)	100.00 (100)
Total	100.00 (86)	100.00 (74)	100.00(14)	100.00(320)

Note: 1. DP: Disease Present and DA: Disease absent. 2. Figure in parenthesis denotes no. of respondents

**Age at Marriage and First Conception:** Mother's age at marriage and first conception definitely have some influence on the incidence of infant/child morbidity. As the mother's age at marriage and first conception increases the incidence of under five child morbidity usually decreases. Mean age at marriage and first conception in for total sample 17.15 years and 19.40 years respectively. Thus difference of 2 years has been noticed from age at marriage to age at first conception. In the sample population, more than 60 percent of mothers had their first conception before 21 years of age. The remaining forty percent of the mothers had their first conception after 21 years. Mother's age at first conception is highly concentrated between 18-24 years. Morbidity of

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children (Diarrhea: 22.22 percent; ARI: 11.11 percent and Malnutrition: 0.00 percent) has declined among mothers of 25 years age group. This shows that age at first conception has profound effect on child morbidity. Women who conceive at later years will have better chances for learning several issues.

*Surviving Children:* Reduction of the incidence of under five child morbidity depends on the fertility level of the couples. As the level of fertility increases the incidence of infant/child morbidity may also increase. All children born to mothers may not survive. Because of this opinion, parents wanted to go for additional number of children. As the number of children increases, the mother's health deteriorates due to insufficient food intakes. Nearly forty percent of mothers had two surviving children. One-fifth of mothers in the study areas had three surviving children. Mean live birth among for the total sample is 2.15, and mean a live birth is 2.39. When the inter relationship between surviving children and the under five child morbidity is studied, Less incidence of infant/child morbidity has been noticed among the mothers with one surviving child (Diarrhea: 26.21 percent; ARI: 21.36 percent and Malnutrition: 3.88 percent) and mothers with two surviving children (Diarrhea: 26.05 percent; ARI: 23.53 percent and Malnutrition: 3.36 percent) when compared to those mothers with more than three surviving children (Diarrhea: 28.57 percent; ARI: 24.49 percent and Malnutrition: 6.12 percent). The reasons may be inability to provide good health care facilities, negligence of mothers in taking care of all children and poor health condition of the mothers.

*Household Size:* Household size includes, children born to the respondents and other members of the household. Household size has significant affect on the morbidity status of children. Considering the total sample, households with four members are high (29.69 percent). Morbidity of children has increased with the increase in number of members in the house The less incidence of morbidity (Diarrhea: 25.42 percent; ARI: 20.34 percent and Malnutrition: 3.39 percent) with family size less than equal to 3 as compared to family size 6+ (Diarrhea: 27.17 percent; ARI: 25.00 percent and Malnutrition: 5.43 percent).

*Types of House:* Houses are divided into huts, semi-pucca and pucca types. The type of house is negatively associated with the incidence of infant/child morbidity. Several studies have supported this statement. The presence of asthma is found to be associated with housing type and overcrowding (Kaplan and Tylor). McMichael et al 2003, adequate quality of housing<sup>6</sup>, lack of environmental sanitation<sup>7,8</sup> and possibly

low levels of immunity would affect morbidity to a great extent. Most people in rural areas live in huts because of their poverty. When the incidence of infant/child morbidity is correlated with type of house, a clear difference in morbidity pattern between different areas has been noticed hut (Diarrhea: 26.94 percent; ARI: 24.35 percent and Malnutrition: 4.15 percent); kutcha (Diarrhea: 33.33 percent; ARI: 22.22 percent and Malnutrition: 3.7 percent) and pucca (Diarrhea: 25.00 percent; ARI: 21.00 percent and Malnutrition: 5.00 percent). Malnutrition is higher in pucca houses which is contradictory.

***Table 2:** Percentage distribution of house ventilation, Caste, educational status of mothers, occupation of father and type of family in relation to selected infant/child morbidity for Uttar Pradesh:*

House Ventilation	Diarrhea	ARI	Malnutrition	Total
	DP	DP	DP	(DP+DA)
Poor	29.27(48)	26.83(42)	4.27(7)	100.00(164)
Moderate	25.00(25)	22.00(22)	5.00(5)	100.00(100)
Good	23.21(13)	17.86(10)	3.57(2)	100.00(56)
<b>Caste</b>				
SC/ST	29.06(34)	23.93(28)	5.98(7)	100.00(117)
Others	25.62(52)	22.66(46)	3.45(7)	100.00(203)
<b>Educational status of Mothers</b>				
Illiterate	28.28(28)	24.24(24)	6.06(6)	100.00 (99)
Primary	27.53(31)	23.89(27)	5.31(6)	100.00(113)
Secondary and above	25.00(27)	21.30(23)	1.85( 2)	100.00(108)
<b>Occupations</b>				
Agricultural or non-agricultural labourers	27.66(39)	24.11(34)	5.67(8)	100.00(141)
Farmer	26.51(22)	22.89(19)	4.82(4)	100.00(83)
Business & Traditional occupation	27.12(16)	22.03(13)	3.39(2)	100.00(59)
Employees	24.32(9)	21.62(8)	0.00(0)	100.00(37)
<b>Type of family</b>				
Nuclear family	25.91(57)	22.73(50)	3.18(7)	100.00(220)
Joint family	26.09(6)	21.74(5)	8.70(2)	100.00(23)
Extended family	29.87(23)	24.68(19)	6.49(5)	100.00(77)
Total	100.00 (86)	100.00(74)	100.00(14)	100.00(320)

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**House Ventilation:** House ventilation has been one of the most important determinants in explaining under five child morbidity. Poor ventilation has been responsible for many respiratory infections, mainly pneumonia, Bronchitis, and Broncho- pneumonia (McMichael et al 2003). Though the disease agent is a biological one, spread of the diseases will be affected by availability of ventilation in houses. Ventilation is one such social factor which promotes the disease agent, and indirectly operates in increasing the morbidity of the under five children. The present study reveals, a good association between house ventilation and the morbidity of the under five children. An indirect association has been observed between house ventilation and the incidence of infant/child morbidity. As the house ventilation improves from poor to good, the incidence of morbidity has also declined from (Diarrhea: 29.27 percent; ARI: 26.83 percent and Malnutrition: 4.27 percent) to (Diarrhea: 23.21 percent; ARI: 17.86 percent and Malnutrition: 3.57 percent).

**Caste:** The present sample consists of SC/ST and others caste respondents. The others population, considered in the sample, has many caste and religions, both forward and backward including both Hindu and Muslims. Many among the backward caste population have better standards of living; in comparison with forward cast population. In general morbidity is found to be high in SC/ST (Diarrhea: 29.06 percent; ARI: 23.93 percent and Malnutrition: 5.98 percent) in comparison with others caste population. Thus caste seems to be a crucial indicator of infant/childhood morbidity.

**Education:** Educational status of mothers of both the regions shows that around one-thirds is illiterates. The remaining proportions of mothers have education at various levels, primary, secondary and collegiate. Incidence of infant/child morbidity was found to be high among illiterate mothers (Diarrhea: 28.28 percent; ARI: 24.24 percent and Malnutrition: 6.06 percent), and as the educational level increased, morbidity was found to decline. At primary and secondary levels of education, less mothers have experienced infant/child morbidity. In the total population an inverse relationship with morbidity has been noticed with mother's educational status. Thus, education is an important determinant of infant/child morbidity.

**Occupation:** Md. Nazrul Islam Mondal et al (2009) have shown association between the occupation of father and infant/child morbidity<sup>9</sup>. Occupations in rural areas yield very meager income to rural populations. The classification of occupation in this rural area has been

mostly either agricultural or non-agricultural labourers on one hand and farmer on the other. The remaining populations are involved

**Table 3:** Percentage distribution of type of relationship of women before marriage to their relationship before marriage, husband Income, Socio-economic index in relation to infant/child morbidity for Uttar Pradesh:

Relationship before marriage	Diarrhea	ARI	Malnutrition	Total (DP+DA)
	DP	DP	DP	
Not related	26.15(57)	23.85(52)	3.21(7)	100.00(218)
Patrelateral	29.79(14)	21.28(10)	8.51(4)	100.00(47)
Matrelateral	27.27(15)	21.82(12)	5.45(3)	100.00(55)
<b>Income (in rupees)</b>				
Less than 6000	31.18(29)	25.81(24)	6.45(6)	100.00(93)
6001-15000	25.71(18)	22.86(16)	4.29(3)	100.00(70)
15001-25000	26.56(17)	23.44(15)	3.12(2)	100.00(64)
25001- 35000	26.47(9)	23.53(8)	5.88(2)	100.00(34)
More than 35001	22.03(13)	18.64(11)	1.69(1)	100.00(59)
<b>Socio-economic status Index</b>				
Low	28.30(45)	24.53(39)	5.66(9)	100.00 (159)
Medium	26.67(36)	23.70(32)	2.96(4)	100.00 (135)
High	19.23(5)	11.54(3)	3.85(1)	100.00(26)
Total	100.00 (86)	100.00(74)	100.00 (14)	100.00(320)

in business, traditional occupation like washer men, tailors, besides a few persons who are employed in local bodies. Father's occupation has shown differential influence on infant/child morbidity. Labourers have experience more infant/child morbidity (Diarrhea: 27.66 percent; ARI: 24.11 percent and Malnutrition: 5.67 percent). Further, farmers (Diarrhea: 26.51 percent; ARI: 22.89 percent and Malnutrition: 4.82 percent), businessmen and people engaged in traditional occupation have experienced higher morbidity conditions (Diarrhea: 27.12 percent; ARI: 22.03 percent and Malnutrition: 3.39 percent) for their infants

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and children. The employed people however, had less infant/child morbidity (Diarrhea: 24.32 percent; ARI: 21.62 percent and Malnutrition: 0.00 percent). For the population of employees alone, very less morbidity of infants and children was noticed.

**Type of Family:** In Indian society, Nuclear families consists of husband, wife and their children only; Joint families consists of more than two married couples and their children; while extended families consist of one or more than one married couple with their unmarried brothers and sisters. In Nuclear families, decisions are taken by the couples, whereas in Joint or extended families, decisions will be taken by the elder members or heads of the households. Sometimes, decision making in joint/extended families is delayed to get approval from the head of the household. Because of these reasons, chances of incidence of morbidity of under five year children is less in nuclear families than in joint or extended families. When the relationship between type of family and the incidence of infant/child morbidity has been considered, extended families had the highest incidence of under five child morbidity (Diarrhea: 29.87 percent; ARI: 24.68 percent and Malnutrition: 6.49 percent) followed by joint families (Diarrhea: 26.09 percent; ARI: 21.74 percent and Malnutrition: 8.7 percent), and nuclear families (Diarrhea: 25.91 percent; ARI: 22.73 percent and Malnutrition: 3.18 percent). However, in some cases, joint families have lesser morbidity which seems to be advantageous. Joint families will have more homogenous population and other sibs usually take care of the morbid children.

**Type of Relationship Before Marriage:** Marriage between cousins and marriage with people having same hereditary diseases might result into propagation of diseases to the offspring. The severity of disease occurrence increases with near cousin marriages. From the table it has been found that unrelated marriages are high. Comparatively, less incidence of infant/child morbidity is observed in unrelated marriages (Diarrhea: 26.15 percent; ARI: 23.85 percent and Malnutrition: 3.21 percent) than the related marriages. Among the related marriages, infant/child morbidity has been high in patrelateral marriages (Diarrhea: 29.79 percent; ARI: 21.28 percent and Malnutrition: 8.51 percent) as compared to matrelateral marriages (Diarrhea: 27.27 percent; ARI: 21.82 percent and Malnutrition: 5.45 percent).

**Annual Income:** Annual income is an economic variable which has some influence on infant/child morbidity. In the study area, the annual income of a family varies from Rs. 6,000 to above 45,000. Slightly less

than half (29.06 percent) households have lowest income of Rs. 6000/- and below. Another one-fifth of the respondents belonged to income levels 15001/- to 25000/- (20.00 percent). For the total population, the average income has been Rs. 16744 per annum. When the inter relationship between annual income and morbidity of under five children is considered, a negative association is observed, i.e. as the annual income increases, the incidence of under five child morbidity decreases. From the results of the study, a high incidence of under five child morbidity has been observed among the families of less than, 6000 rupees annual income (Diarrhea: 31.18 percent; ARI: 25.81 percent and Malnutrition: 6.45 percent). The incidence of infant/child morbidity among lower income groups comes down towards higher income groups. However, income levels have shown marked inverse association with morbidity from Rs. 25001 in case of ARI and Malnutrition and above income per annum. This reveals that income has a better association with morbidity and occupation and income seem to be better indicators of infant/childhood morbidity.

**Socio-economic Status Index:** Incidence of infant/child morbidity is negatively correlated with socio-economic status<sup>9,10, and 11</sup>. (Md. Nazrul Islam Mondal et al 2009, Jayshree D Naik et al, 2013, Amit Kaushik et al 2014). Socio-economic status indices have been calculated to know the combined effect of independent variables on dependent variable morbidity and it is a more sensitive index. Education of the mother, father's occupation, and annual income of the family are considered for computing the socio-economic status index. Considering, the total number of mothers, in both the study areas, more than 90 percent belong to low and medium socio-economic status groups. A minor proportion belonged to a higher socio-economic group. A clear negative association between infant/child morbidity and socio-economic status has been found. Morbidity decreased with increase in SES indices followed by Low (Diarrhea: 28.3 percent; ARI: 24.53 percent and Malnutrition: 5.66 percent), medium (Diarrhea: 26.67 percent; ARI: 23.7 percent and Malnutrition: 2.96 percent) and high (Diarrhea: 19.23 percent; ARI: 11.54 percent and Malnutrition: 3.85 percent) socio-economic status. This shows that morbidity has decreased with increase in socio-economic status.

**Conclusion:** The study reveals that high incidence of infant/child morbidity has been found among the younger aged mothers. Infant/child morbidity is high among the mothers who conceived children

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before 21 years of age. Morbidity of children has been increasing with the increase in the number of surviving/live births. Type of house has been found to be an important determinant in influencing the incidence of infant/child morbidity. Illiterate mothers had high incidence of infant/child morbidity, when compared to educated mothers. Children, in joint and extended families, had higher morbidity than children belonging to nuclear families. Further, children born to mothers who had blood related marriages, seems to have more morbidity and also children belonging to SC/ST seems to have high morbidity. Mothers, who came from high socio-economic status, had less incidence of infant/child morbidity. Others research studies have also shown the similar results<sup>7, 9, 10, 11</sup>.

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# Multiple Dimensions of Community Based Tourism

## *Analyzing the Possibility of Bharathapuzha River Basin*

Remya R Kumar

### **Abstract**

The banks of Nila (Bharathapuzha) could be rightly described as a perfect blend of cultures that had touched and settled on her banks and has bestowed a rich lifestyle, spirituality, traditional skills and agrarian practices which could be experienced here more than in any other parts of Kerala. The study area is immersed in its cultural diversity with the richness of its literature, classical and folk art forms, astronomy, astrology, mathematics, architecture, trade, martial history and politics.

Community participation is an essential factor for the conservation of the eco-system of any region and there are several examples where tourism initiatives have been used as a tool to rope in the community with the conservation efforts. The present study aims at finding whether the Bharathapuzha River basin has the potential to involve in Community Based Tourism (CBT) to derive a solution to the various ecological problems of the region and at the same time empowering the local population. A sustainable development of the region is aimed at by adopting the concepts of responsible tourism by using a holistic approach where the local communities come together and take ownership for the holistic conservation of the region. (Cape Town Declaration, August 2002)

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**Keywords:** Community Based Tourism, Conservation, Livelihood, Bharathapuzha (Nila)

## **1. Introduction**

Nila has witnessed some of the most extensive gathering of culture and trade from around the world and some of the unique cultural heritages of our country were nurtured and flourished here. Some of the world's most important bio-diversity regions survived and flourished on the banks of tributaries and catchment areas of Nila, thus giving lots of scope for eco-tourism to flourish.

The study aims in listing the existing and potential tourism resources and for identifying the effectiveness of using tourism as an innovative tool, which could bring local communities surrounding the river and its civilization to come together and take ownership for the holistic conservation of Nila basin. The specific objective of the study is as follows:

- To identify the potential for the development of CBT on Bharathapuzha River basin

## **2. Nila Basin Characteristics - Case in Point**

### ***a) Demographic Profile of the Study Area***

Nila flows through three districts namely Palakkad, Thrissur and Malappuram, over an area of 4,400 sq. km. There are around 85 panchayaths abutting Nila. In Palakkad district, the river has 67 panchayaths located along either banks, 11 panchyaths in Malappuram district and 7 in Thrissur district.

According to the census 2011; the total population of Palakkad district was 25, 49,356 of which 18, 10,003 people resides along Nila, i.e., about 71% of the total population. In Malappuram out a total population of 37, 51,419 there were 21,883 people residing in the panchayaths abutting Nila. In Thrissur as per census 2011, the total population of the district was 25, 79,363, of which 204693 people resided in the panchayaths abutting Nila.

### ***b) Socio-Economic and Cultural Profile of the Region***

The study area has been renowned by groups living in closed community like Brahmin settlements, Sambavan Settlements, Kumbharan settlements, Weaver settlements. The tribal groups in this area include Irular, Kadar, Malamassar, Paniyar, Kurumbar,

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Cherumar, Kanakkar, Parayar, and Pulayar. Pannar, Kavara and Vannan etc. are found in the Parambikulam, Kuriyarkutty, Nelliampathy and Kodassery forest areas.

The region has a primary sector driven economy, agriculture is the predominant occupation of people of this region. Apart from primary sector some manufacturing industries are also seen, like Agricultural implements, uncoated paper and paper board, wheat products, tile factory etc.

### ***c) Ecological profiling of Nila Region***

Nila is one of the largest west flowing rivers in the southern Indian states. The higher altitudes of the region support terrestrial biodiversity and marine biodiversity. The transitional region between Nila and its adjoining land flourishes with biotic communities living along the shore-riparian communities. The flora that dominates these areas includes the aquatic, semi aquatic and terrestrial plants, belonging to flowering as well as non flowering groups. Palakkad Hills that also have some of the endemic animals and birds. Bharathapuzha flowing through three districts of Kerala and its abutting Panchayaths has been mapped on GIS and is attached to this document as Annexure number 1.

### **3. Community Based Tourism – A Brief Introduction**

Community-based tourism refers to tourism that are owned and managed by community. Furthermore, this kind of tourism implies that the community will take care of its tourism resources in order to gain income through operating tourism enterprise and this ensures a better standard of living of the incumbents. Hence, the community-based tourism involves conservation, business enterprise and development of the community.

WWF defined it as a form of tourism “where the local community has substantial control over, and involvement in, its development and management, and a major proportion of the benefits remain within the community.” WWF accepted that the concept of community depends on local “social and institutional structures” and accepted that it “must also embrace individual initiatives within the community” (Guidelines for Community Based Eco-Tourism:2001).

The tourism along Nila has the scope to involve the community, many of the assets identified in Table 1 is either owned or managed

by the local community and the objective of introduction of tourism should be to bring about wide benefits to the community.

#### **4. Methodology**

The study was conducted in three phases and the data for this study was gathered during several field visits in 2014. The qualitative methods used were literature analysis, in-depth interviews with the inhabitants of the clusters and the officials of the Local Self Governing bodies of the abutting panchayaths and widespread consultation with conservation experts and officials of tourism department and observation method.

In the first phase of the study, the researcher tried to identify the diversified tourism potential of the region. The various tourism resources of the region were identified through secondary data analysis, consultation with academicians, environmentalists and stakeholder consultation with authorities of Local Self Governing bodies.

In the second phase, by observation method the tourism potential of the identified tourism resources were gauged and the existing conditions of the assets were accessed.

In the third phase, several clusters of communities present along Nila and their livelihood opportunities were identified and in-depth interviews were conducted with some of the inhabitants. The identified tourism assets were listed and classified and it was mapped on GIS and the same has been annexed as Annexure number 2 and is attached to this document.

#### **5. Tourism Products which could be developed along Nila**

The scope for development of CBT along Nila is being inspected in this part of the paper. The identified destinations along Nila should be knit into certain tourism circuits and sub-circuits.

***Ecotourism Circuits:*** Ecotourism has been defined as a responsible travel to natural areas that conserves the environment and sustains the well being of local people. (The International Ecotourism Society, 1996).

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**Table 1:** List of Ecotourism spots on the banks of Nila

<i>Sl.No.</i>	<i>Eco-Tourism spots</i>	<i>Sl.No</i>	<i>Eco-Tourism spots</i>
1.	Malampuzha dam	2.	Biyyam Kayal
3.	Silent Valley	4.	Ponnani
5.	Mangalam	6.	Padinjarekkara Beach
7.	Dhoni	8.	Nelliyampathy Hills
9.	Siruvani	10.	Vazhani Dam
11.	Meenkara	12.	Meenvallam water falls
13.	Parambikulam	14.	Attappady

As seen on the table along Nila you could see several eco tourism sites like the Silent valley, Nelliyampathy hills, Parambikulam tiger reserve, Dhoni hills, Meenkara dam Malampuzha etc, where tourism is already prevalent. Taking into consideration the geographical positions of the spots and the connectivity they can be blend into eco-tourism circuits.

*Literary Tourism Circuits:* Literary tourism is a type of cultural tourism that deals with places and events from fictional texts as well as the lives of their authors. This could include following the route taken by a fictional character, visiting particular place associated with a novel or a novelist, or visiting a poet's grave.

**Table 2:** List of authors associated to the region

<i>Sl.No</i>	<i>Laureates along Nila</i>	<i>Sl.No.</i>	<i>Laureates along Nila</i>
1.	Akkitham Achuthan Namboothiri	15.	M.T.Vasudevan Nair
2.	Kaikulangara Rama Warrior	16.	MadhaviKutty
3.	Kallanmarthodi Ravunni Menon	17.	Melpathur Narayana Bhattathiri
4.	Balamani Amma	18.	O.V.Vijayan
5.	C. Radhakrishnan manakkal	19.	Olappamanna Subramanian Namboothirippad
6.	Edasserri Govindan Nair	20.	P.Kunjiraman Nair
7.	K. N. Ezhuthachan	21.	Poonthanam
8.	K.P. Narayana Pisharody	22.	Punnashery Neelakanta Sharma
9.	KP.Keshava Menon Achutha Pisharodi	23.	Thrikandiyoor

*Contd...*

<i>Sl.No</i>	<i>Laureates along Nila</i>	<i>Sl.No.</i>	<i>Laureates along Nila</i>
10.	Kunjan Nambiar Ezhuthachan	24.	Thunjath
11.	Kuttikrishna Marar	25.	Uroob
12.	M. P. Sankunni Nair Narayana Menon	26.	Vallatol
13.	M.Govindan	27.	V.K.N
14.	M.Sukumaran		

The table reveals the scope of evolving a literary tourism belt along Nila. Nila has been the backdrop for several Malayalam literatures. Some of the illustrious Malayalam writers hailed from her banks have been listed in the table. Tourism products like museums; literary walks etc could be introduced in places like ‘Thekkai Grammom’, where Tunjathu Ezhutachan spend his last 30 years.

*Cultural Tourism Circuits:* Cultural tourism can be defined as that activity which enables people to experience the different ways of life of other people, thereby gaining at first hand an understanding of their customs, traditions, the physical environment, the intellectual ideas and those places of architectural, historic, archaeological or other cultural significance which remain from earlier times.

**Table 3:** *List of cultural assets of the region*

<i>Sl.No</i>	<i>Cultural Assets</i>	<i>Sl.No</i>	<i>Cultural Assets</i>
1.	Tunjan Gurumadom, Chitoor	2.	Kerala Kalamandalam
3.	Tippu Sultan Fort Temple	4.	Thirumittakod
5.	Kalpathy Ayyappa Temple	6.	Chamravattom Lord
7.	Chemba Gramam	8.	Thrippangode
9.	‘Kalakathu Bhavanam’, Killikurushimangalam	10.	Thunchan Parambu
11.	Punarjani Guha Ponnani	12.	Jumma Masjid of
13.	Iver Madom by Pandavas Handloom Village	14.	Kanyarkali
15.	Kuthampully	16.	Konganpada

Cultural tourism differs from recreational tourism in that it seeks to gain an understanding or appreciation of the nature of the place

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being visited.” (International Scientific Committee on Cultural Tourism Charter for Cultural Tourism, Draft April 1997).

The tourism proposed along Nila should demonstrate how tourism could be used as a tool for cultural mobility and thereby promoting cultural consumption. The scope of using tourism as a development tool for rural areas along Nila, where culture of Kerala is well preserved, has been examined. Culture and Community-based partnership are likely to be very effective in this area. Banks of Nila shows an amalgamation of several distinct cultures. Before entering Palakkad, the river shows shades of Tamil culture, as it reaches Ottapalam, it becomes the lifeline for ‘Valluvanadan Keralam’ or Central Kerala ethos. Finally in the last lap, on reaching Ponnani, it imbibes and emits Kerala Muslim culture.

*Music- based Tourism Circuits:* This part of the paper investigates the scope for Music- based tourism in context of childhood locations of art and music icons like Kunjan Nambiar and Chembai Vaidya Nadha Bhagavadar, the place where musical instruments that are near extinction are taught like the Kerala Kalamandalam and the place where several prominent practicing musicians hail from.

**Table 4:** *List of art forms and musical instruments associated to the region*

<i>Sl.No</i>	<i>Art Forms Performed</i>	<i>Sl.No.</i>	<i>Musical Instruments Performed</i>
1.	Koodiyattam	1.	Idakka
2.	Kadhakali	2.	Chenda
3.	Mohiniyattam	3.	Madallam
4.	Thoal Paava Kuttu	4.	Kurum Kuzhal
5.	Chakyar or Prabhandam Kuttu	5.	Mizhav
6.	Ottantullal		
7.	Namgyarkuttu		
8.	Tayambakam		
9.	Kadhakali		
10.	Mohiniyattam		
11.	Thoal Paava Kuttu		
12.	Kadhakali		
13.	Mohiniyattam		
14.	Thoal Paava Kuttu		

The association of Nila to the art and music can be highlighted by the 'Kerala Kalamandalam', a Deemed University of Art and Culture, is a major centre for learning Indian performing arts, is situated in the village of Cheruthuruthy in Thrissur District on the banks of the Bharathapuzha River. Chembai Gramom is a village in Palakkad district near Nila. It is the birth place of Sri Chembai Vaidyanatha Bhagavathar, the great Carnatic maestro and the village is named after him. His adobe is still preserved and could serve as an important cultural asset. Apart from the above said there are several famous art performers from this region. Thoal paava kuttu, the art of Shadow Puppetry is practiced in temples in this region. There is 'Tholpavakoothu kala kendram', a learning centre for this art format Koonathara on the banks of Nila.

*Heritage Tourism Circuits:* Heritage tourism is defined as traveling to experience the places, artifacts, and activities that authentically represent the stories and people of the past and present. It includes cultural, historic and natural resources" (National Trust for Historic Preservation, 2008).

**Table 5:** List of heritage sites along Nila

<i>Sl.No.</i>	<i>Historical Assets</i>	<i>Sl.No</i>	<i>Historical Assets</i>
1.	Legend of 'Parayipetta Panthirukulam'	15.	Bhraanthankotta
2.	Narippatta Mana	16.	Durga temple, Rayiranellur hill
3.	Vemancheri Mana Thirunavaya	17.	Mani kinnar
4.	Thrithaala Appan	18.	Nilapadu Thara
5.	Yagneswara Temple	19.	Neolithic settlements
6.	Velutha Patteri Illam	20.	'Mamangam'
7.	Koodallur Kodanat Mana	21.	Navamukundan Temple
8.	Velliyamkallu Thirunavaya	22.	Mani kinnar
9.	Paakkana Colony	23.	Nilapadu Thara
10.	Kadavalloor Anyonyam	24.	Anakkara Vadakkath Family
11.	Narayanamangalathu Mana	25.	Attappady

The heritage tourism products along Nila depends on the staging or re-creation of ethnic or cultural traditions and it is believed that high perception of authenticity can be achieved since the event is staged in its original source of the cultural tradition. A large number of heritage

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attractions are located on the banks of the river and has the potential to be developed as a tourism destination. The region's cultural and historic significance could be highlighted by many monuments which still remain, for example the Mamankam monuments and monuments of the famous folklore 'Parayi Petta Pandiram Kulam'. We can see several settlements along Nila for example Kalpathy, the Brahmin Hamlet of Kerala, are the first Heritage Village in the state. Chandrapuram Gramam, is an untouched Brahmin settlement, on the banks of Bharathapuzha. Then Kuthampally is a beautiful handloom village surrounded on all three sides by Bharathapuzha. Kuthampally is famous for Kasavu handloom weaving. Another example would be the Vadakkath Tharavadu at Anakara still standing tall along Nila, a Nalukettu of architectural beauty, near Kootanad, in Palakkad district has given birth to generations of illustrious men and women like Captain Lakshmi (Dr.Lakshmi Sehgal). Tipu's Fort, also known as Palakkad Fort, stands in the heart of Palakkad town which is also very near to Bharathapuzha course.

### **6. Potential Advantages CBT could Bestow in the Region**

The various communities identified along Nila include - fishermen community, sculptors, weavers, potters, blacksmith, Brahmins etc. The introduction of CBT would increase the employment opportunities of these communities, by engaging in their usual livelihood activities but by simply reorganizing it. Initiatives like use of local produce by the hotels, introduction of local restaurants etc would ensure minimum leakage of economic benefits from the host communities and would generate income for the people of the locality. Along with tourism development there will be a general infrastructure development conducive to the tourism growth. The development of each micro destination development would lead to collective benefits to the society such as development of roads, other amenities. CBT initiatives should identify the poor farmers and other less privileged class of the society such as the Tribes which are present in several hamlets along the region and should ensure their participation in the activities and thus the empowerment of these classes takes place.

CBT along Nila highlights the region's culture and leads to the development of the cultural assets and historical assets. Rejuvenation of these will help in the tourism enhancement and would also pave way for the cultural revitalization and conservation of these monuments and cultural practices. This will also instill a sense of pride in the locals. The demand for dying art forms and livelihood practices could be

increased tremendously with the help of tourism. The region is renowned for art and music, so with the emergence of tourism the local performers could educate and train the tourists. Then several other livelihood skills are practiced along the region like pottery, fishing etc where the tourists could be made to take part in and thereby generating revenue for the locals.

Bharathapuzha is the source of drinking water as well as water for irrigation in Palakkad, Malappuram and Thrissur, in recent years there has been severe drought and drinking water shortage in these districts, and this is directly connected to the receding water levels in Nila. The tourism that can happen along Nila would be water based tourism and this requires the conservation of the river, CBT involves the local community to take care of the resources. Thus with the help of the local community initiatives to conserve Nila such as increase the water level at several stretches, water hyacinth removal, de-silting, prohibition of river encroachment and putting a check on sand mining has to be done.

## **7. Potential Hurdles that could be Encountered during Introduction of Tourism along Nila**

The problems that could affect the tourism along Nila have been mentioned here. The potential resources along the region have not been augmented and harnessed efficiently this has resulted in decreased number of tourists along this region. According to Tourism Statistics, 2013, North Kerala contributes only 22% of the total tourism traffic of Kerala, but in spite of being underutilized tourism is one of the major drivers of economy of Kerala.

The villages along Nila are changing its characteristics and heritage buildings are being pulled down in several places thus is losing its heritage value, for example the handloom village in Kuttampully has changed immensely and centuries old buildings along the region are in a dilapidated condition due to lack of maintenance.

Nila is the life line of tourism planned along Nila thus it is essential for the river to be saved. The river bank is getting polluted by dumping of solid waste. Water bodies are getting covered by water hyacinth which degrades the beauty of the river as well as becoming life threatening to the underwater living organisms. When we discuss the environmental aspects of Nila basin the main concern is on the ruthless illegal sand mining which is a threat to the very existence of Nila. Thus tourism development in the region needs to address all these aspects.

### 8. Conclusion

In summary, this article had thrown light on the various dimensions of introducing CBT on Nila river basin. The tourism assets have been identified and the advantages of developing tourism in the region have been discussed and this could be some of the initiative that could enable an integrated regional development.

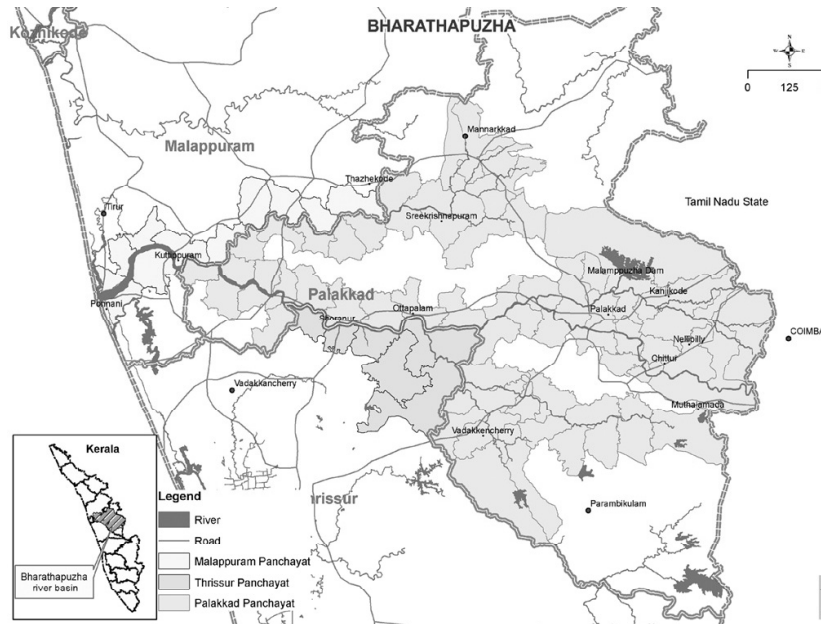
This paper has a novel approach to the ecological problems in Nila basin wherein the communities along the region also directly participate in the conservation initiatives of the river and are direct beneficiaries of the same. The paper gives a general understanding of the region; social, cultural, economic and ecological aspects of the region. The paper also discusses on the aspects which makes CBT model of tourism a feasible solution to the socio-economic development of the region and also the environmental is also discussed. It provides for the advantages of introducing CBT in Nila basin.

Future researches could carry out a micro-destination analysis of the identified destinations in terms of understanding infrastructure gaps of each micro destination, the impacts tourism can bring about to the society such as the social impacts, the economic impacts and the ecological impacts. Then identifying the attitudes of the locals towards tourism development in the region and identification of the carrying capacity of each destination could be meaningful sources of new ideas and innovations for the Kerala tourism industry.

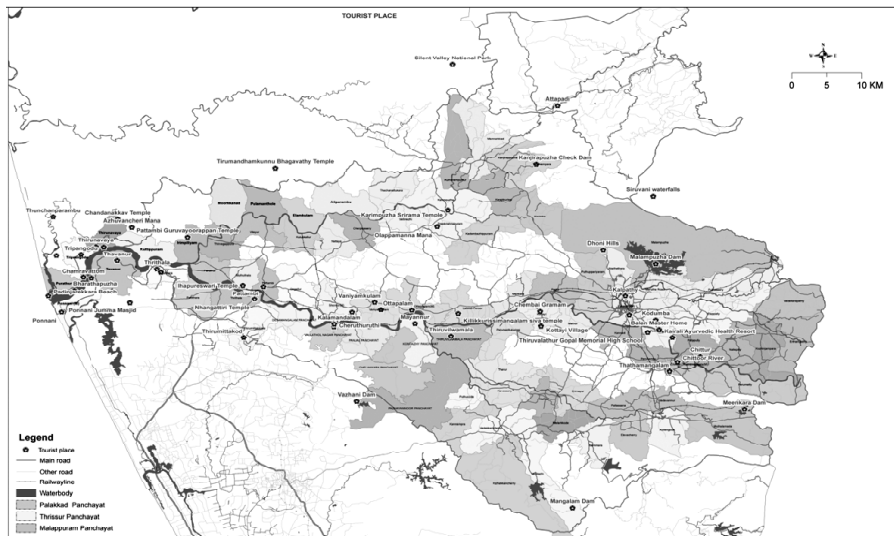
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Annexure 1



Annexure 2



# The Objectification of Women's Self Image in Indian News Media: Ethnography of Misogynist Indian Culture

Bharti Pandey

## 1. Objective

The objectification of Indian women in the news media has been offending and indignant. This research argues the image of an “ideal woman” (as portrayed by the news media of India) is derogatory. This paper analyses the increasing rate of cosmetic surgery, sexual assault, stalking crimes, sexual objectification, sexual discriminations and belittling of women.

What is a definition of being “Ideal woman”, who decides on which parameter, standard of being real woman, the answer is often the “Media”. Using a sociological perspective, Research explore how the media, portrayal of women continues unrestricted and endless with defamation.

The objective of this research is to make an investigation about the presentation or portrayal of women in Indian News Media through feminist perspective. News media in India do not provide a balanced picture of women's diverse live and contributions to society in a changing world.

The research questions of the present study are:-

- How the term “feminist “is being coined by Indian Media?
- What is the definition of “Ideal woman” in the eye of Indian Media?

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- How media performing offending role in developing malign image of Indian women?
- What is influence on 'Viewer' perception about empowerment of women in society?
- Is physical beauty is most important and valuable asset of women?
- Is good woman is the traditional house wife long suffering, pious and submissive, the modern women who asserts herself and her independence in undesirable and can never bring happiness to anybody or find happiness for herself ?
- Is working women is the undesirable exception who must be brought into the marriage fold and made to bound in traditional society names ?

Indeed, women's portrayals are erotic and soft focus because soft focus is feminist.

## **2. Literature Review**

This research utilizes sociological literature and review that argues adverse and unrealistic portrayals of women in the media with negative impact on India's women self-image and respect.

*Sharma K. Dr. Sanjeev (2008);*

*"Depiction of women in Indian Media-A case of introspection for Media planner"*  
*Samaj, Bhigyan 1, April-Sept pp 32-36,*

In this article, Dr. Sanjeev k. Sharma criticizes the ways how Indian Media both print & electronic are portraying women in the era of globalization. The actual and diseased issues are not concentrated instead a media brings the insulting status for womanhood in India; women are used as a commodity of sex object. In television, also there are various serials where women are shown involved in conspiracy, premarital, extramarital affairs, wearing costly and heavy jewellerys and portraying image of negative feminism of Indian woman, who is involved in malign politics of family affairs. He also explained that in most of the advertisement, the portrayal of women is vulgar and cheap.

Tomar Ranu in her seminar paper (2011), "Gender and Media status of women journalist in Hindi print Media in India" presented at university of work' 19-22 "Sept. In her seminar, paper Ranu Tomar

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attempt to explore the struggle for transformation and bridging gap between social identities of women and men. The relationship between Media and women has certain structure where women are trapped as an object. She also states that role of women in media decision making is reflected in the poor representation of women issues and concerns.

According to the “The Hindu”, article October 21, 2009 ; Number of Indian women seeking plastic surgery growing rapidly. According to this article, there is no official data on the number of cosmetic surgery procedures being conducted in India. The number of going for cosmetic women surgeries have jumped manifold over the last five years.

Rakesh Khazanchi, senior consultant of the department of plastic and cosmetic surgery at the Sir Gangaram Hospital said “cosmetic procedures like Rhinoplasty , Liposuction, Buttock lifts have seen a whopping increase of nearly 150 percent in the last 5 years, nearly 10 percent of these women suffer from body Dysmorphic disorder (BDD) and are in their late teens or early 20’s.

The depiction of women in advertisement is actually insulted to the women in general which are destroying the real status and dignity of women. According to status of women in Indian society on advertising, the portrayal of women’s, advertisements have been held responsible for projecting women in a derogatory light and as inferior class of being some advertisement contains obscene and nude scene showcasing model to endorse product with her flaunting body.

### **3. Specification of Research site and Locus**

In order to fulfill the objectives of the study the analytical method have been implemented. An analytical method is that where a researches has to use facts or information which are already available and analyze these to make a critical evaluation of the material. Data for this study collected from the secondary data. The secondary data includes Newspaper, journals and websites.

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# Creativity among School Students

Dr. Anita Arora & Prof. Bharati Roy

## Abstract

The present study aimed at examining the creativity among school students. The study was conducted on 200 Hindu adolescents studying in classes Xth and XIth of Ranchi district. The sample stratification was based on achievement level (high and low), gender (boys and girls) and place of residence (rural and urban). Students were classified into two groups namely-high achievers (students obtained over 70% marks) and low achievers (students obtained less 50% marks). Creativity Test developed by Chouhan and Tiwari (1974) administered to measure the creativity among school children. Analysis of Variance was used to see the main and interaction effects of achievement level, gender and place of residence on creativity. Findings showed that out of three factors namely, achievement category, gender and place of residence only achievement category was found to produce significant main effect on creativity. The interaction effect of achievement category and gender (AXB) were statistically significant (F value 52.56), which showed that the effect of gender on creativity were not the same for high and low achieving subjects. The interaction effect of achievement category and place of residence (AXC) was also significant as F value was 50.92. It indicated that the effect of achievement category on creativity were different for the urban and rural subjects. The interaction effect of gender and place of residence (BXC) were not significant as the F value was 2.77, which showed that the effect of gender were the same for the urban and rural groups. The third order interaction (AXBXC) were insignificant.

**Key Notes:** Creativity, academic achievement.

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Creativity is a unique power of mind. It provides new knowledge and new inventions that can improve the quality of human life. It is the root towards progress. Creativity is the sum of fluency, flexibility, and the originality in an individual. The most important aspect of creativity is the ability to think or imagine in a different way. Lubart (1994) defines creativity as involving the ability to produce work that is both novel and appropriate. Kronfeldner (2009) defined creativity as a process that includes psychological novelty, originality, spontaneity, usefulness and adaptive value..Creativity is a confluence of six distinct resources namely, intellectual abilities, knowledge, certain styles of thinking, personality attributes, intrinsic task-force motivation and supportive environment. Creation means an act or process of creating something new brought into the world. It is something brought into the existence or created out of human intelligence and imagination (Rjamanickam 2005).

Creativity is the capacity of persons to produce compositions, products or ideas of any sort which are essentially new or novel, and previously unknown to the producer. It can be an imaginative activity, or thought synthesis, where the product is not a mere summation(Hurlock 1997). A creative person is characterized by such cognitive factors and personality dispositions as divergent ability, independent judgement capacity , high feeling tone accompanied with sensitivity and affectivity transformational ability and redefining capacity, expressional excellence, spontaneous flexibility and adaptivity. By and large, he is a person endowed with integration of cognito -affective behavioral dynamics deeply saturated with high feeling tones and tender affectivity (Sharma 2000).

Creativity is regarded the greatest assets of mankind. It is an ability that is most vital for shaping the future of man. Researchers have shown that children are creative by nature for they have innate ability to see new relationships and produce new combinations out of existing things or their parts (Rather 2009).Creativity, thus, the highest order of human potentiality of a country that contributes optimum growth and development, progress and prosperity and nurtures the greatness and glory of a nation's destiny (Panda 1999). Creativity is a quality which each human being is capable of exhibiting. Individuals, however, as a result, of both, nature and nurture, vary in the amount and kind of creativity they display. Creativity contributes towards the mental health, education, vocational success and many other important areas

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in life .School environment is an important determinant of the creativity of students (Shan 2000).The teacher plays a very important role in providing a conducive climate for creative growth in the classroom. When behavior of the teacher makes a difference in the children's behavior, their problem solving capacity, social contribution and creativity in students get expressed. Conscientious and mild-mannered teachers often create autonomy in the children and vicious cycle in the classroom. Socially introducing behavior is likely to accelerate the creative environment ( Hota 2003).Creative persons are distinguished more by interest, attitude, values, motives and drive than intellectual ability alone. Students have to be helped by the teacher to cultivate varied interest areas including games and play, flexibility, open mindedness, spirit of cooperation but competition, a desire to achieve something extraordinary and derive psychic satisfaction out of such accomplishment (Hota 2003).

The study of creativity occupies the most crucial position in understanding the mental and spiritual potentials of the human mind. Torrance (1965) pointed out that sex difference in creativity appears early in life but not until the age of five. Boling and Boling (1993) found that firstborn males and later born females demonstrated the greatest creativity. Shan (2000) studied creative thinking among high school students of Jammu region in relation to school students with high problem solving ability have significantly higher levels of creative thinking as compared to their counterparts with low problem solving ability. Matud and Grande (2007) studied the relevance of socio-demographic factors on gender differences in creative thinking.

The results revealed that women with a university level education scored higher than those with secondary or primary educational levels on all the creative measures, but no differences were found among the men. Gender differences in creative thought were minimal and dependent upon educational level; men with primary or secondary levels were found to score higher than women with the same level of education. Women with a university level education scored higher than men at the same level, yet statistically significant differences were only found for Verbal Fluency. Garg and Agarwaal (2008) in their study of adolescent creative thinking and its relation to the psychosocial environment , concluded that home environment has a strong role in the development of creative thinking. Charyton et al. (2008) investigated gender similarities and differences in general creativity

constructs with their preferences for creative persons. Results indicated that males and females tended to have similar levels of general creativity. Agrawal (1977) have reported that till the age of 13 years boys tended to score higher on creativity than girls but after 13 years the relationship is reversed. Dharmangadan(1981) reported a non – significant relationship between sex and creativity. He stated that with growing age creativity increases except in figural originality . Ai( 1999) , Karimi (2000) found that there is a relationship between creativity and academic achievement. Habibollah etal. (2009) , Palaniappan (2000) found no gender differences on creativity. Jahan (2007) reported that creativity increases after the age of 17 years. All these studies however don't lead to any definite conclusion about the impact of gender upon creativity.

The purpose of the present study was to measure the creativity among school students.

**Sample:** The sample of the present study consisted of 200 Hindu adolescents studying in classes xth and xith , who were selected on stratified random basis from different schools located in urban and rural areas of Ranchi district, The sample stratification was based on achievement level (high and low), gender (boys and girls ) and place of residence (rural and urban). Thus there were eight sample sub-groups, each sub –group consisting of 25 cases to make 200 cases in total. All the cases of different sample sub-groups were matched on age, type of school (govt. and private ) and IQ level.

**Tools:** Following tools have been used in the present research.

- *Personal Data Questionnaire (PDQ):* This questionnaire was prepared to obtain information about respondent's name, age, class, sex, religion, place of residence and family background etc.
- *Creativity Test:* This test is developed by Chouhan and Tiwari ( 1974) to measure creativity of the school children. This test consisted of 32 items covering dimensions of creative production, fluency, original power, flexibility and ingenious solution of problems. The reliability coefficient of the test is .364.

The purpose of the study was to see whether creativity was associated with academic achievement, gender and place of residence. With this point of view results were tabulated and interpreted.

Table 1 presented the summary of analysis of variance which showed the main and interaction effect of achievement level, gender and place of residence on creativity.

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**Table 1:** Summary of Analysis of Variance

Sources	SS	Df	Mean Squares	F	P
AchievementLevel(A)	46726.245	1	46726.245	285.8394	<.01
Gender(B)	531.38	1	531.38	1.3522	NS
Place of residence(C)	894.645	1	894.645	2.2843	NS
AxB	18312.87	1	18312.87	52.56	< .01
AxC	18572.76	1	18572.76	50.92	< .01
BxC	1370.73	1	1370.73	2.77	NS
AxBxC	38972.93	2	19486.47	50.45	<.01
WSS	279576.67	192	386.24		

NS: Not significant.

Findings showed that out of three factors namely, achievement category, gender and place of residence only achievement category was found to produce significant main effect on creativity. The obtained F value was 285.84, statistically significant at 0.01 level. Table 2 confirmed this result.

**Table 2:** Mean scores, SDs and t values of High and Low Achievers on Creativity

N	Mean Scores	SDs	t value	P value
100	98.95	15.12	17.00	0.01
100	68.35	9.85		

In Table 2 Mean scores ,SDs and t value of high and low achievers on creativity were presented. It depicted that there was statistically significant difference between high and low achievers on creativity. The mean scores of high and low achievers were 98.95 and 68.35 respectively. The obtained t value was 17.00 ,which was statistically significant at 0.01 level. It stated that high achievers were more creative than low achievers

The main effects of gender and place of residence were statistically insignificant as F values were 1.35 and 2.28 respectively. Male and female students and urban and rural groups did not seem differ in their scores of creativity. The interaction effect of achievement category and gender (AXB) were statistically significant ( F value 52.56), which showed that the effect of gender on creativity were not the same for high and low achieving subjects. The interaction effect of achievement category and place of residence (AXC) was also significant as F value

was 50.92. It indicated that the effect of achievement category on creativity were different for the urban and rural subjects. The interaction effect of gender and place of residence (BXC) were not significant as the F value was 2.77, which showed that the effect of gender were the same for the urban and rural groups. The third order interaction (AXBXC) were insignificant.

### **Conclusion**

- High and low achievers differed significantly in their creativity.
- High achievers were more creative than low achievers.
- There was no influence of gender and place of residence on creativity. Both girls and boys were found to be equally creative. In the same way the level of creativity was same in rural and urban students. Habibollah, et al. (2008) found no gender differences on overall factor scores for both "What kind of person are you?" This is consistent with the findings in Palaniappan's (2000) study which supported the view that there is no gender difference for general factor scores.

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# Interrelation of Human Rights and Humanitarian Law

Anjay Kumar

## Abstract

“Each one of us is no more and no less than a human being”, is the basis of humanitarianism. Adversity in every case is a threat to prosperity. It is unknown that why people feel concerned about the strangers or unknown persons. The cruellest reality, nationally and internationally, is the violation of human rights during peace as well as during the armed conflict. The preservance of humanity is the prime concern of both the laws and human suffrage must be avoided at any cost and in every situation. The precondition for the full observance of human rights is “Peace” and war is its negation. This article examines the interrelation of human rights and humanitarian law and explains the difference in the scopes, purposes and application of the two laws. With the aid of humanitarian law the fundamental rights of humans can be protected in armed conflicts as well.

**Keywords:** International human rights law, International humanitarian law, ICRC, United Nations, Geneva Conventions, Armed conflict, Non-international armed conflict.

## Evolution of the Concept of Human Rights

Laws are the embodiment of the rules that regulate the human conduct and the administration of justice. A right is an entitlement which one person can bring against another in the permitted legal sphere. Human rights are those fundamental and inalienable rights which are essential for the life as a human being<sup>1</sup>. The human right<sup>2</sup>

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came somewhat late in the vocabulary of mankind. It was first used by Thomas Paine in the English translation of the French Declaration of the Rights of Man and Citizen<sup>3</sup>. The roots for the protection of the rights of man may be traced as far back as in the Babylonian laws.<sup>4</sup> Human Rights are as old as humanity.<sup>5</sup> The World's all major religions have a humanist perspective that supports human rights despite the differences in the contents. The rights of man have been the concern of all civilizations from time immemorial. The people of earlier age were familiar with human rights. Indian history is warranted by the fact that the human rights jurisprudence has always progressed smoothly through a historical path and never lost its link with the past. The philosophers of Vedic age opine that human rights, earlier called as "natural rights", are inherent in our nature without which we cannot live as human beings. They are based on mankind increasing demand for a life in which the inherent dignity and each human being will receive respect and protection. Human rights and humanitarian law form an essential part of international law. The purpose of these laws to protect individual as well as collective fundamental rights and freedoms. The connection between human rights and humanitarian law may be considered from two distinct view points: First, analysis of the significance of humanitarian law with regard to the observance, promotion and defence of human rights; second the relation between human rights law and humanitarian law as two distinct branches, sectors or aspects of modern international law. Laws are the embodiment of the rules that regulate the human conduct and the administration of justice. Human rights are those fundamental and inalienable rights which are essential for the life as a human being<sup>6</sup>. Human rights are something of which no one can be deprived without a grave affront to justice. There are certain deeds which should cause offence to justice. There are certain deeds which should never be done, certain freedoms which should never be invaded, something's are supremely sacred<sup>7</sup>.

### **Historical Development of Human Rights**

The concept of human rights is as old as the ancient doctrine of 'natural rights' founded on natural law<sup>8</sup>. The history of human rights covers thousands of years and draws upon religious, cultural, philosophical and legal developments throughout the recorded history. It seems that the concept of human rights is as old as the civilization. This is evident from the fact that almost at all stages of mankind there have been a human rights documents in one form or the other in

existence. Several ancient documents and later religious and philosophies included a variety of concepts that may be considered to be human rights. Notable among such documents are the Edicts of Ashoka issued by Ashoka the Great of India between 272-231 BC and the Constitution of Medina of 622 AD, drafted by Muhammad to mark a formal agreement between all of the significant tribes and families of Yathrib later known as Medina<sup>9</sup>. However, the idea for the protection of human rights grew after the tragic experiences of the two world wars. Prior to the world war, there was not much codification done either at the national or the international levels for the protection and implementation of human rights. Under the French Declaration<sup>10</sup>, rights of men and citizens includes guarantee of equality<sup>11</sup>, liberty<sup>12</sup>, free speech<sup>13</sup> and laid down that law is the expression of the general will.<sup>14</sup> These apart, there are various other documents<sup>15</sup> also reflected the ideas of human rights which helps in its development. In fact, since the beginning of the 19th century it was recognised in the constitutional law o many States that human beings possess certain rights. Worth of human personality began to be realised.

### **Human Rights after World Wars**

Earlier, human beings as such had no rights under the traditional international law, which was defined as the law which govern relations between States. This theory about the nature of international law had a number of consequences as far as individual is concerned like treatment of the individual was limited to the domestic jurisdiction of each State and Stateless person does not enjoyed any protection under traditional international law. However, this theory had exception like intervention of other State on humanitarian ground<sup>16</sup>, limitation of sovereignty by treaty<sup>17</sup> and mandates system under the league of nation.<sup>18</sup> The idea of human rights emerged stronger after World War II. The extermination by Nazi Germany of over six million Jews, Sinti and Romani (gypsies), homosexuals, and persons with disabilities horrified the world. Trials were held in Nuremberg and Tokyo after World War II, and officials from the defeated countries were punished for committing war crimes, “crimes against peace,” and “crimes against humanity.” Neither utilitarianism nor scientific positivism, the philosophies that had undermined the natural rights concept, could address the problems. The dominant political paradigm, realism, could not find national interest violated. The language of human rights seemed more appropriate. After the war, the Nuremberg War Crimes Tribunal introduces the subject of gross human rights violations to the international relations. The individual German soldiers were charged

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of crimes against humanity.<sup>19</sup> The revival of the concept of human rights can thus be seen as a reaction to the horrors of the War. During the next decades, normative and institutional foundation played the role in the human right movement.

### **Normative Foundation**

The first wave got its momentum from the horrors of the World War II. In the aftermath of the war, the United Nations Charter included promotion of respect for human rights and fundamental freedoms among the principal purposes of the organization. The UN moved quickly to formulate international human rights norms<sup>20</sup>. In 1948 the Assembly adopted the Universal Declaration of Human Rights<sup>21</sup> (UDHR). The UDHR, commonly referred to as the international Magna Carta, extended the revolution in international law ushered in by the United Nations Charter – namely, that how a government treats its own citizens is now a matter of legitimate international concern, and not simply a domestic issue. It claims that all rights are interdependent and indivisible. Its Preamble eloquently asserts that: “WHEREAS recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world.....” The influence of the UDHR has been substantial. Its principles have been incorporated into the constitutions of 193 nations now in the UN. Although a declaration is not a legally binding document, the Universal Declaration has achieved the status of customary international law because people regard it “as a common standard of achievement for all people and all nations.” During that time League of Nations existed but it was weak and lacked the power to deal with human rights issues and therefore it was expected that the UN Charter shall provide an effective international systems for the protection of human rights but this did not happen because of opposition from the major problems as they had serious problems of their own at that time whereas smaller countries favoured the inclusion of Bill of Rights in the Charter, lacked the political influence. Consequently, the human rights provisions of the Charter as adopted in San Francisco were weak and vague. However, despite the vagueness, the human rights provisions of the Charter had a number of important consequences namely; The Charter internationalized the concept of human rights, though all the matters did not *ipso facto* come out of domestic jurisdiction and the obligation of the member States of the UN to cooperate with the organization in the promotion of human rights provided the UN with the requisite legal authority to undertake a massive effort to define and codify these

rights. The success of the UN effort is reflected with the adoption of the International Bill of Rights and in the vast number of international human rights instruments in existence today.

### **Institution Building**

At this stage the evolution of international human rights law began in the late 1960s and continued for 15 to 20 years. The second wave of activism was influenced by the newly independent states of Africa and Asia. There were some important conventions<sup>22</sup> and covenants<sup>23</sup> established during the decade: Together with the Declaration the Covenants form the essential written core of international human rights norms.<sup>24</sup> These apart, during this period, two distinct developments took place within the UNs framework. The first focussed on the nature of human rights obligation which article 55 and 56 created for the member States. The phrase “to promote” was somewhat vague but the vagueness was removed by the adoption of ECOSOC resolutions<sup>25</sup> With the goal of establishing mechanisms for enforcing the UDHR, the UN Commission on Human Rights proceeded to draft two treaties: the International Covenant on Civil and Political Rights (ICCPR) and its optional Protocol and the International Covenant on Economic, Social and Cultural Rights (ICESCR). Together with the Universal Declaration, they are commonly referred to as the International Bill of Human Rights. In addition to the covenants in the International Bill of Human Rights, the United Nations has adopted more than 20 principal treaties further elaborating human rights. These include conventions to prevent and prohibit specific abuses like torture and genocide and to protect especially vulnerable populations, such as refugees<sup>26</sup>, women<sup>27</sup>, and children<sup>28</sup>. In Europe, the Americas, and Africa, regional documents<sup>29</sup> for the protection and promotion of human rights extend the International Bill of Human Rights. These instruments have powerfully demonstrated a pull in demand for respect of human rights.

### **International Humanitarian Law (IHL)**

Human societies have always developed legal systems to govern their relations. This includes situations of conflict between groups. Early man and primitive societies had basic rules and ritualistic behaviour. As societies became more developed so did the rules. Agreements on the treatment of PW can be found in Egypt as far back as 1400 BC.<sup>30</sup> There are also records of rules for humane treatment of non-combatants in some Indian states around 500 BC. A rudimentary form of international law was practised by Greek city states and the

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Romans. This included rules which regulated warfare. The rationale for these rules is the same today: no to inflict unnecessary suffering. It is believed that the first systematic code of war was that of the Saracens, based on the Koran.<sup>31</sup> During the sixteenth century, nation states emerged in Europe and a system of international law came into being. Part of this law was a code of chivalry; however, the desire for regulating war derived principally from national or personal interests rather than humanitarian concerns<sup>32</sup>. For example, the conference called by Tsar Nicholas II in 1899 was motivated by the fact that Russia was falling behind in the nineteenth century arms race rather than by genuine humanitarian concerns. The modern LOAC originated from the customary practices adopted by those taking part in battles.

### **The Modern Law of Armed Conflict (LOAC)**

The origins of the modern LOAC can be traced to the battle of Solferino in 1859 in northern Italy. After witnessing the results of this battle a young Swiss merchant, Henri Dunant, wrote an influential book which described the carnage and the neglect of the wounded. The impact of this book and Dunant's subsequent efforts led to the formation of the Red Cross. In 1864, the Swiss Government, at the urging of the Red Cross, convened the first conference on International Humanitarian Law (IHL). At this conference the first Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field was drawn up and signed by 16 nations. Subsequent conferences in 1906, 1929 and 1949 further developed and refined IHL. The latest development has been the Additional Protocols (G. P. I and G. P. II) which were adopted in 1977. Perhaps the most celebrated early attempt at codifying the customs and usages of war came with the American Civil War. In 1863, Dr Francis Lieber, an eminent lawyer, at the request of President Lincoln and in consultation with a board of officers, drew up a code of conduct titled 'Instructions for the Government of Armies of the United States in the Field'. This instruction established limits on a belligerent's means to wage war and identified military objectives as the only legitimate targets for deliberate attack. An early agreement dealing with the means and methods of war was the Declaration of St Petersburg in 1868 which prohibited the use of any projectile weighing less than 400 grams which was either explosive or charged with fulminating or inflammable substances. The principles stated in the preamble to the declaration are still relevant today.

The LOAC developed along two separate streams *i.e.*, Hague Law and Geneva Law each named after the city where most of the relevant

agreements were developed. Hague Law is a term used to describe the set of international laws, which regulate the means and methods of warfare. It comprises a series of treaties which state what is, or is not legitimate in waging war. In 1899, Tsar Nicholas II of Russia in a note addressed to the diplomatic representatives at St Petersburg called for a conference with the purpose of seeking 'a real and lasting peace and above all, of limiting the progressive development of existing armaments'. While the conference failed in its main objective to limit armaments, it was partially successful. Three declarations were adopted, one prohibiting the discharge of projectiles from balloons, a second prohibiting the use of asphyxiating gases and a third prohibiting the use of expanding bullets. The most important achievement from this conference, however, was the Convention for the Pacific Settlement of International Disputes creating the Hague Permanent Court of Arbitration, and creating a list of judges from which the parties to a controversy might select the members of an arbitral tribunal for their particular case. Subsequent conventions include the Hague Convention of 1907, the Gas Protocol of 1925, 1954 Hague Cultural Property Convention, 1972 Biological Weapons Convention, 1980 Conventional Weapons Convention and the 1993 Chemical Weapons Convention. G. P. I and G. P. II are not confined to humanitarian issues; they also address issues which are traditionally regarded as Hague Law. Much of Hague Law is accepted as customary international law and directly affects the use of combat power.

The Geneva Law: In 1864 at the invitation of the Swiss Government, a conference was held in Geneva which drew up 'the first Convention for the Amelioration of the Condition of the Wounded in Armies in the Field'. This convention was subsequently amended by the Geneva Conventions of 1906, 1929 and 1949, and by G. P. I. These agreements now constitute what is referred to as Geneva Law, which is fundamentally concerned with the relief of suffering of PW, the wounded and sick in the field, wounded, sick and shipwrecked mariners and civilians caught up in conflict. Hague Law is concerned essentially with how operations are conducted, Geneva Law is concerned with the protection of persons not involved or no longer involved in the conflict. The Protocols, linked to the Geneva Conventions, deal not only with the protection of victims of war but also with the means and methods of warfare, which were traditionally the domain of Hague Law. G. P. I deals with international armed conflict while non-international armed conflict is further addressed by G. P. II. After World War II, tribunals were established at Nuremberg and Tokyo to try the major war

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criminals of the Axis powers. These tribunals were empowered to deal not only with war crimes but also with crimes against peace and crimes against humanity. The latter were defined by the tribunals, and identified as crimes under international law.

The basic principles underpinning LOAC are: Military necessity, avoidance of unnecessary suffering, and proportionality. Unnecessary suffering is often also referred to as the principle of humanity. Traditionally, chivalry has been included in the list of principles but this is now classified as an element of the principle of unnecessary suffering and is not treated as a separate topic. The three principles must be considered together in that no single principle can be considered in isolation from the other two. In other words, whilst military necessity may justify a particular action, the action may cause unnecessary suffering including civilian death, or damage may be totally disproportionate to the military advantage to be gained. If so, the action should not proceed because the military necessity is outweighed by proportionality and humanitarian considerations. **Military necessity:** The principle of military necessity states that a combatant is justified in using those measures, not forbidden by international law, which are indispensable for securing complete submission of an enemy at the soonest moment. Military necessity requires combat forces to engage in only those acts necessary to accomplish a legitimate military objective. It permits the killing of enemy combatants and other persons whose death is unavoidable. It permits the destruction of property if that destruction is imperatively demanded by the necessities of war. Destruction of property as an end in itself is a violation of international law. There must be a reasonable connection between the destruction of property and the overcoming of enemy forces. The principle cannot be used to justify actions prohibited by law, as the means to achieve victory are not unlimited. This also reflects the principle of war of economy of effort.

### **Relationship of Human Rights with IHL**

Anywhere in the universe where there is an armed conflict, there is human suffering and the victims. The indiscriminate killings and unattended wounded, prisoners and missing persons. IHL seeks to limit this suffering as much as possible and inspired by the principles of humanity and is based on legal as well moral values. According to Starke, one of the most remarkable developments which largely explain the replacement of the former title, 'laws of war' by 'IHL' has been the importation of human rights rules and standards into the law of armed

conflicts.<sup>33</sup> The essential purpose of these rules is not to provide a 'code' governing game of war, but for humanitarian reasons to reduce or limit the suffering of individuals. IHL has always been a element of vital importance in the safeguarding and defence of human rights, both before and after the Geneva Conventions of 1949 and the additional protocols of 1977. It is clear from different provisions of these conventions that they are aimed at ensuring the observance of certain human rights is guaranteed in specific situations. The common article 3 enjoins humanitarian treatment without distinction of any kind. The Common Article 3<sup>34</sup> of the Geneva Conventions, 1949 states that the certain minimum rules of war apply to armed conflicts that are not of an international character, but that are contained within the boundaries of a single country. The applicability of this article rests on the interpretation of the term armed conflict. For example, it would apply to conflicts between the Government and rebel forces, or between two rebel forces, or to other conflicts that have all the characteristics of war but that are carried out within the confines of a single country. A handful of individuals attacking a police station would not be considered an armed conflict subject to this article, but only subject to the laws of the country in question. The other Geneva Conventions are not applicable in this situation but only the provisions contained within Article 3, and additionally within the language of Protocol II. The rationale for the limitation is to avoid conflict with the rights of Sovereign States that were not part of the treaties.

The aim of Article 3 is, to safeguard the human rights of such persons in the specific situations in which they find themselves. The wording of Article, it may be pointed out is identical with that is used in UDHR, 1948 and in ICCPR, 1966. The link between International human rights law and the IHL and the acknowledgement of the fact that they are derived from the same general principles aimed at protecting human beings has become established in current legal theory.<sup>35</sup> The IHL and international human rights law have developed along with different lines historically. Yet, despite these two distinct and parallel lines of development which show nonetheless that GC of 1864 enshrines the essential principles of human rights and its necessary universal unbiased recognition, enjoining as it does the duty of equal treatment for all wounded, whether allies or enemies, more and more interconnections have developed, particularly in recent years, owing to the existence of principles common to both. It is to be noted that, in the event of an armed conflict, the application of the IHL does not necessarily exclude the application of international human rights law.

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Human beings can consider themselves protected by both sets of standards.<sup>36</sup> Though the IHL overlaps international human rights law, yet in no circumstances may its provisions be suspended, as is possible with certain provisions of human rights law in times of war or public emergency threatening the life of a nation. It is generally acknowledged that to deal with an extraordinary situation effectively, it may be necessary to suspend certain human rights guarantees. Art. 4 of the ICCPR recognise this right of states parties to the covenant to take measures derogating from their obligations under the covenant which are necessary to deal with the situation. Article 4 of the ICCPR:

1. In time of public emergency which threatens the life of the nation and the existence of which is officially proclaimed, the States Parties to the present Covenant may take measures derogating from their obligations under the present Covenant to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with their other obligations under international law and do not involve discrimination solely on the ground of race, colour, sex, language, religion or social origin.
2. No derogation from articles 6, 7, 8 (paragraphs I and 2), 11, 15, 16 and 18 may be made under this provision.
3. Any State Party to the present Covenant availing itself of the right of derogation shall immediately inform the other States Parties to the present Covenant, through the intermediary of the Secretary-General of the United Nations, of the provisions from which it has derogated and of the reasons by which it was actuated. A further communication shall be made, through the same intermediary, on the date on which it terminates such derogation. Apart from these limitations certain basic human rights are not suspended even in case of serious emergency situations, thereby, all but the non-derogable provisions, the 'hardcore' of international human rights law, may however be suspended.<sup>37</sup>

The most important non-derogable rights, which are outlined in Article 4<sup>38</sup>, are: Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life. In countries which have not abolished the death penalty, sentence of death may be imposed only for the most serious crimes in accordance with the law in force at the time of the commission of the crime and not contrary to the provisions of the present Covenant and to the Convention on the Prevention and Punishment of the Crime of

Genocide. This penalty can only be carried out pursuant to a final judgement rendered by a competent court. When deprivation of life constitutes the crime of genocide, it is understood that nothing in this article shall authorize any State Party to the present Covenant to derogate in any way from any obligation assumed under the provisions of the Convention on the Prevention and Punishment of the Crime of Genocide. Anyone sentenced to death shall have the right to seek pardon or commutation of the sentence. Amnesty, pardon or commutation of the sentence of death may be granted in all cases. Sentence of death shall not be imposed for crimes committed by persons below eighteen years of age and shall not be carried out on pregnant women.<sup>39</sup> The right to be free from inhuman or degrading treatment or punishment.<sup>40</sup> The freedom from slavery and servitude<sup>41</sup>. The right to liberty and freedom from arbitrary arrest or detention.<sup>42</sup> People deprived of their liberty shall be treated with humanity.<sup>43</sup> The right privacy and its protection by the law and the freedom of thought, conscience and religion.<sup>44</sup> Since these rights are regarded as most basic at all times, no derogation from them is permitted even during a serious emergency situation. They are expected to afford minimum protection to the people. It is submitted that if greater protection is to be afforded to the people, more and more rights need to be treated as non-derogable.

### ***Relationship between Human Rights and IHL***

Both IHL and Human Rights law are international law subjects. All IHL treaties are international in scope; Human Right treaties can be international or regional. Like IHL is applied during the time of war or armed conflicts alone, the law of human rights law applies at all times. The State becomes a party to a Human Rights Treaty, bounds within the provisions of the treaty, humanitarian treaties have wider implication. The former indicates how a party to a conflict is to behave in relation to people at its mercy, whereas human rights law concentrates on the rights of the recipients of a certain treatment. There is also difference in the appearance of the treaty texts is that humanitarian law seems long and complex, whereas human rights treaties are comparatively short and simple. Both sets of law protect persons against arbitrary and unnecessary cruel treatment. IHL is to seeks make balance between military necessity and humanity. Developed through practice and then through treaty law; contains a very large number of detailed rules that reflect the balance. Human right expressed as rights, and then balance between individuals and State created through limitation clauses and derogation possibilities. Treaty rules brief: detail developed through case-law and interpretation

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by treaty implementation bodies. IHL divided into two main areas: law on the conduct of hostilities and law for the protection of victims. Law on the protection of victims (mostly in four Geneva Conventions 1949). Also there is a phenomenon in human rights law, which is quite alien to humanitarian law, namely, the concurrent existence of both universal and regional treaties, and also treaties make a distinction between so-called “civil and political rights” and “economic, social and cultural” rights. The most important change as far as humanitarian law is concerned is the fact that recourse to war is no longer a legal means of regulating conflict.

In general, humanitarian law is now less perceived as a code of honour for combatants than as a means of sparing non-combatants as much as possible from the horrors of war.<sup>45</sup> From human rights point of view, it is on respect for human life and well being; where as the use of force is in itself a violation of human rights. Human rights can be classified as follows; First generation rights which include civil and political rights, Second generation rights such as economic, social and cultural rights, Third generation rights such as the right of self-determination and the right to participate in the benefits from mankind’s common heritage<sup>46</sup> and Human rights may be either positive or negative. An example of the former is the right to a fair trial and an example of the latter is the right not to be tortured.<sup>47</sup> There is less treaty law applicable in non-international armed conflicts than in international.

This is not relevant to human rights law, although issues relating to prisoner-of-war status will affect the application of judicial guarantees to captured persons. HR law traditionally divided into civil and political rights (CPR), and economic social and cultural rights (ESCR) (also a third category: group rights). ESCR taken less seriously and use of them requires precise knowledge of how they have been interpreted by the UN Committee for ESCR. There is no such problem for IHL, many provisions of which are ESCR in nature (provision of food, shelter, medical care). Both IHL and HR require national implementation measures to make them reality i.e. legislation, training and publicity. For IHL, both require to some degree training of the military and the legal profession, but obviously more attention needs to be given to the military for IHL and to the legal profession for HR. In addition, both need to be generally known in outline by the general public and all persons in authority or influence. IHL does not have systems like those of HR. There is an international fact-finding commission which has not been used. A supervisory mechanism exists

in that the ICRC has access to prisoners of war (since 1929) and interned civilians (since 1949) in international armed conflicts (including occupation). The ICRC may also offer to visit places of detention in non-international armed conflicts and other situations of violence. This is done very widely.

IHL and international human rights law are two separate branches of international law with a common and complementary purpose to safeguard human dignity in all circumstances. While some of their rules are similar, these two bodies of law have developed separately and are contained in different treaties. Both seek to protect the individual, though they do so in different circumstances and in different ways. Humanitarian law applies in situations of armed conflict whereas human rights, or at least some of them, protect the individual at all times, in war and peace alike.

Unlike IHL, many provisions in human rights law may be suspended during an armed conflict. While the purpose of humanitarian law is to protect victims by endeavouring to limit the suffering caused by war, human rights law seeks to protect the individual and further his/her development. Humanitarian law is primarily concerned with the treatment of persons who have fallen into the hands of the adverse party, and with the manner in which hostilities are conducted, whereas by limiting the power of the State over individuals, human rights essentially seek to prevent arbitrary behaviour. It is not the aim of human rights to regulate the ways in which military operations are conducted. In order to ensure that it is respected, humanitarian law establishes mechanisms that institute a form of ongoing control over its implementation; it places the emphasis on cooperation between the parties to the conflict and a neutral intermediary with a view to preventing violations. Consequently, the approach of the ICRC, whose role it is to ensure respect for IHL, gives precedence to persuasion. The mechanisms for monitoring human rights are extremely varied. In many cases, the appropriate institutions are required to establish whether or not a State has respected the law. For instance, the European Court of Human Rights may, upon completion of proceedings brought by an individual, declare that the European Convention on Human Rights has been violated by a national authority. The latter is then obliged to take the steps necessary to ensure that the internal situation meets the requirements of the Convention. The mechanisms for implementing human rights are essentially intended to make good any damage sustained.

### **Conceptual Similarities in Regards to the Present Context**

A conceptual question can be raised that whether human rights law can be applied in armed conflict as well? The philosophical basis of human rights advocates that by virtue of the fact that people are human, they always possess them. The answer in one sense is that they do continue to be applicable, because certain rights are known as “hard-core rights”, which the States are bound to respect in all circumstances. However, the major difficulty of applying human rights law as enunciate in the treaties is the very general nature of the treaty language. What is therefore needed is a code of action applicable in advance. Human rights lawyer has constantly turned to humanitarian law because, despite of its different origins and formulation, compliance with it has the result of protecting the most essential rights both civil and economic and social type. The protection of children and family life,<sup>48</sup> respects for religious faith of prisoners of war and detained civilians<sup>49</sup> is also given a great deal of importance in humanitarian law.

### **Mutual Influence- Human Rights and Humanitarian Law**

In connection of mutual influence Article 3<sup>50</sup> common to the all four Geneva Conventions reveals a real miniature treaty. It diverges from the traditional approach of humanitarian law, which in principle did not concern itself with the relations between a State and its Nationals.<sup>51</sup> International Conference of Human Rights in Tehran, in 1968 considered as the turning point as U.N. for the first times considered the application of human rights in armed conflicts. The Commission was set up to promote the implementation of human rights, it does not hesitate to invoke humanitarian law when the situation so requires. It is becoming apparent that legal instruments should be drawn up combining elements of both humanitarian and human rights law in order to provide rules that can be applied if peacetime as well as in wartime. This objective was behind till adoption in 1990 of the declaration of Minimum Humanitarian Standards, the so-called Turku Declaration. This text makes it clear not to take a position on any dichotomy between humanitarian law and human rights law.

### **Applicability of Humanitarian Law and Human Right**

IHL is a branch of international law that provides protection to human beings from the consequences of armed conflicts. The application

of humanitarian law as it appears to contravene the general principles of *ex injuria non oritur ius* (no one should obtain a legal benefit from his own illegal action). IHL obviously has much in common with the law of human rights since both the bodies of rules are concerned with the protection of the individuals. The International Court of Justice in *Nicaragua* case had observed that the principles of humanitarian law are identical with the elementary consideration of humanity.<sup>52</sup> It being so there is a close relationship between the two. The General Assembly of the United Nations has adopted quite a number of resolutions regarding humanitarian law under the title of “Respect of Human Rights in Armed Conflicts”, thus emphasizing for obvious reasons the close relationship existing between them. This question can be answered in various ways. Some claim that ignorance of the law is largely to blame, others that the very nature of war so wills it, or that it is because of the international law and therefore humanitarian law is not matched by an effective centralized system for implementing the sanctions, among other things, because of the present day structure of the international community. However some measures at international level have received warm welcome like the penal repression of war crimes can be seen as one means of implementing humanitarian law.<sup>14</sup> The international community has created a permanent International Criminal Court, which will be competent to try war crimes, crime against humanity and genocide. IHL applies to all armed conflicts, i.e. international armed conflicts as well as non-international armed conflicts (like civil war, civil strife and threshold internal conflicts). The above question was raised and distinction was drawn in two Protocols adopted on June 3, 1977 by the Diplomatic Conference on the Reaffirmation and Development of IHL Applicable in Armed Conflicts, which finally stated that the Humanitarian law is applicable to both the categories of armed conflicts. The extent of applicability of humanitarian law has been extended various areas.

**Judicial Attitude:** In India also the awareness regarding to the rights of the individual had gone through the pivotal shift as Justice J.S. Verma while addressing United Nations Commission on Human Rights,<sup>22</sup> detailed the increasing concerns of India and positive contribution to the jurisprudence of human rights and to an understanding of their universality and indivisibility. The Supreme Court had delivered various judgements to set precedents and had brought radical change in the concept of human rights. The Court had discussed the universality of human rights in *Chairman Railway Board v. Chandrima Das*<sup>23</sup> where the issue related to compensation payable

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to a foreign tourist who was raped at Yatri Niwas was at question. The defendant contented that she cannot invoke Article 21 of the Constitution for compensation, because she was not an Indian national. The court overruled the argument, and held that the fundamental rights enshrined in the Constitution are in consonance with the *Universal Declaration of Human Rights*, 1948. Also court while discussing about the rights of the prisoners in *State of AP v. Challa Ramkrishna Reddy*<sup>24</sup> held that fundamental rights, which include basic human rights, continue to be available to a prisoner. The Court declared that a prisoner does not cease to be a human being, and his rights can't be seized on the ground of sovereign acts.

### **Human Rights Law: Enforcement and Implementation**

With all the conventions and declarations added up, it would be difficult to imagine the human rights of any individual or a group of individual remaining unprotected. The real problem, therefore, is not an agreement on protection, but regarding implementation and enforcement. The main burden for enforcement must have been carried by some international organisation, because in majority of cases an individual's rights are violated by his or her own state, and, so one could hardly count upon that state for satisfaction. The paradox is that at least since the end of World War II, the protection of human rights of every person as a general international obligation has been a most prominent topics in international meetings. Yet, it has become binding only on those states that have ratified the relevant conventions along with reservations convenient to the parties. The individual still has to rely mainly on the state to get his her rights, when most likely it is the state which is party to the process of violations. In fact, the maltreatment of nationals by their respective states including those that have signed and ratified different conventions has increased considerably. Despite obstacles to information a rough picture emerges. In its First Report of Torture<sup>53</sup>, amnesty international discussed a similar number of countries and presented clear evidence that violations take place in most of them.<sup>54</sup> Again in its report of 1993, "conspiracy of terror" it is reported that millions of men, women and children have been slaughtered or have disappeared since 1960. They have not the victims of war between nations, but have been the victims of deliberate government policies of repression who were singled out because of their political views, their ethnic origin, or simply because they were poor. Their killings or disappearances have been ordered or condoned by state officials, the very people entrusted with job to protect them<sup>55</sup>.

Since its inception, the UN has been swamped with complaints alleging violations of human rights and fundamental freedoms. In certain situations, such communications are of sufficient volume and weight to create an image of systematic and mass violations of human rights. It was not until 1967 that the UN started to some form of coordinated attention to such communications. Prior to this, the commission on human rights was of the opinion that it had no power to take action with regard to any complaints concerning human rights. This opinion given in 1947 was confirmed by the economic and social council in 1959. However, at present both the commission on Human rights and its sub-commission are authorized by ECOSOC through its resolution of June 6, 1967:

To examine information relevant to gross violations of human rights and fundamental freedoms ... Contained in the communication listed — pursuant to resolution.<sup>56</sup> There are several difficulties with the enforcement by external agencies:

- (i) UN has to justify a violation as a threat to international peace because major function of the UN is to maintenance of peace and security.
- (ii) UN agencies do not generally interfere in matters which fall essentially within the domestic jurisdiction of states.
- (iii) Giving individuals the right to address themselves directly to international agencies would make them subjects of international law, a right which for the obvious reasons the states are reluctant to grant;
- (iv) Many states have conferred specific rights based on universal, generally stated but abstract human rights. International documents do not generally override these national legislations.

A valid domestic jurisdiction defence can no longer be founded on the proposition that the manner in which a state treats its own nationals is ipso facto a matter essentially within its domestic jurisdiction. A government's human rights policy is no longer prima facie a domestic matter. A state engaging in gross violations of human rights must be considered to be violating obligations under the charter and consistently may not be protected by the domestic jurisdiction clause of the charter.<sup>57</sup>

### **Non-International Armed Conflicts (NIACs) and IHL**

Traditionally NIACs were considered as purely internal matters for the states, in which no international law provisions applied. This view was radically modified with the adoption of Art. 3 common to 4

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GCs. For the first time, the society of states agreed on a set of minimal guarantees to be respected during NIACs. Prior to 1949 attempts were made by ICRC, but regarded by lawful governments as unfriendly acts of interference in their internal affairs.<sup>58</sup> In 1864 as result of pioneering work of Henry Dunant, who had been appalled by the brutality of the *battle of Solferino*. In 1868, the declarations of St. Petersburg prohibited the use of small explosive and incendiary projectiles. Laws of war were further codified at the Hague conferences of 1899 and 1907. The 'Martens Clause' It is 'legal safety-net'. Where there are loopholes in the rules of positive law, says the Martens clause, then a solution based on basic humanitarian principles must be found<sup>59</sup>. The law on the protection of the victims of war has been developed, revised and codified in the four Geneva Conventions of August 12, 1949. The essence of these Geneva Conventions is the principle that persons not actively engaged in warfare should be treated humanely<sup>60</sup>. Although the GCs of 1949 were primarily aimed at IACs, yet CA 3 did provide in case of NIACs occurring in territory of one of the parties, a series of minimum guarantees for protecting those not taking active part in hostilities including sick and wounded. In *Nicaragua Case* the ICJ held CA 3 to be applied as a minimum yardstick, in addition to the more elaborate rules which are also to apply to CA 3 developed and supplemented by AP-II, 1977.

### **Collective Responsibility for Implementation of IHL**

Breaches of IHL by members of the armed force of a state entail the responsibility in international law of the state concerned. This means that the state must answer to the injured state for the consequences of each and every case of unlawful conduct by each and every member of its armed forces. The injured party may also turn to the ICRC requesting it, as part of its humanitarian work to urge the adverse party to observe the rules of IHL. In *Nicaragua Case*,<sup>61</sup> the ICJ stated that the Geneva Conventions were in certain respects the extension of the general principles of International Humanitarian Law and, in another respect, simply the expression of those principles. The object of the principles is the protection of the human being and of inherent human dignity. They are, therefore not concerned with the interests of the parties to conflict. Grave breaches of the protection provided by IHL are, therefore of concern to more than just the parties directly involved in the conflict. They affect all states bound by the humanitarian conventions. The primary objective of United Nation Charter, to prevent war, to regulate the conduct of it, makes IHL peripheral. In fulfilling

this objective, the UN Charter permits the Security Council to authorize use of force under chapter VII<sup>62</sup>. It no doubt that within the competence of the United Nations to act in the event of breaches of IHL. The establishment of ICTY and ICTR shows that UN take the violation of IHL takes threats to peace and security. The UN charter makes no mention of IHL. The UN purposes and principles are expressed in human terms. Therefore the UN refers to IHL as “human rights in armed conflict.”<sup>63</sup> The GCs virtually fail to refer the UN. Under the UN Charter, the main aim of the UN while comforting an armed conflict is to stop it and solve the underlying controversy.

### **Conclusion**

Human rights bodies are now recognizing the importance of judicial guarantees to protect hard-core rights. This is because those drawing up humanitarian law treaties had seen from experience the crucial importance of judicial control in order to avoid arbitrary executions and their inhuman treatment. A perception, of human rights has motivated the perception of honour in combat which has otherwise lost influence in modern society. Given that human rights law is primarily concerned with behaviour within a State, it is possible that resistance to further responsibility in internal armed conflicts will be eroded by human rights pressure.

Although, law of human rights and humanitarian law are different in respect of origin but now IHL is increasingly perceived as part of human rights law applicable in the armed conflict because both are based on human considerations and therefore the subject of both the laws is protection of human beings. So, there can be no harm even if both are consider as same as far as there question of application arises because ultimate aim of both the laws is to save the persons from suffering of hell on the earth itself. IHL is applicable in armed conflicts only, whereas, international human rights law applicable all situations. All but the non-derogable provisions the “hard-core” of international human rights law, may however be suspended, under certain conditions. While it is an important rule of international human rights law that all human beings equally benefit from these rights, the traditional approach of IHL, consistent with its development as inter-state law aims mainly at protecting enemies. Nevertheless, victims or armed conflicts who are not “protected” do not completely lack protection. In conformity with and under the influence of international human rights law, they benefit from a growing number of protective rules, which however, never offer the full protection foreseen for “Protected persons”

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The IHL and international human rights law have developed separately. They even vary greatly in content, a fact easily explained by the differences in their fields of application. Human rights law sets limits to the power of the state with respect to all persons subject to its authority, apply all times. IHL is a special law created for war which influences relations between the belligerents for the purpose of guaranteeing the human rights of persons in the power of the enemy. In civil wars, the protections provided under international human rights law and IHL overlap. Though in a state of emergency human rights guarantees are incomplete, yet the well developed international monitoring procedures and implementation mechanisms of human rights treaties supplements the more “indirect” effects of the law Geneva. Human beings can consider themselves protected by both sides of standards. In situations which are not governed by IHL, all human beings are protected by international human rights law, though in exceptional circumstances, the duty to guarantee the exercise of some rights may be waived. Such absolutely fundamental rights, which can be revoked and which must be observed at all times, and in, whatever, circumstances constitutes the essential core of respect for human rights. They are true cases of *Jus-cogens* in the present international situation whose violations entail the nullity of the legal act which infringes them, whatever its nature.

The fundamental Convergence and shared concerns of international human rights law proper and IHL are further borne out by the fact that ICRC has extended its sphere of protective action, on the basis of humanitarian principles but not on those of GCs, to political prisoners, even when they have been imprisoned as a consequence of an armed conflicts, but as result of political repression. This is an application of IHL aimed at protecting certain fundamental human rights i.e., life, liberty, the right not be tortured and not to suffer degrading treatment, by an organ of IHL such as ICRC in a situation which differs from those which have traditionally determined the necessary practical and personal scope of this law. In the time of peace no one wants to think about the kind of situation where IHL is put into practice. Nor is it easy to foster enthusiasm for legal rules which are beyond people’s personal experience. But unless certain efforts are made and steps taken in peacetime, it cannot be expected that these rules will be implemented in time of crisis or war. Frequent violations of humanitarian rules and a widespread ignorance of their content, problems and limits have caused considerable difficulties for acceptance of this part of international law. Plans of action and lists of priorities

for the implementation of IHL cannot be worked out unilaterally but only through joint understanding of the practical impact of this field of law even in peacetime. The coexistence of IHL and HRs appears indispensable to render complete and effective legal protection.

### **Footnotes**

1. Tim Hiller, “*Source Book on Public International Law*” P.681 (Cavendish Publishing Ltd,1998)
2. A right is an entitlement which one person can bring against another in the permitted legal sphere
3. A.Reis Monteiro, ‘*Ethics of Human Rights*’ p.59 (Springer Cham Heidelberg New York Dordrecht London,2014)
4. Babylonian King Hammurabi issued a set of laws to his people which are called Hammurabi’s Codes available at [www.history.com/topics/ancient-history/hammurabi](http://www.history.com/topics/ancient-history/hammurabi)
5. From Manu Smiriti to Magna Carta. From French Revolution to American Declaration of Independence. From the Universal Declaration of Human Rights to the Constitution of India
6. Tim Hiller, “*Source Book on Public International Law*” P.681 (Cavendish Publishing Ltd,1998)
7. <http://www.jstor.org/stable/20024883> accessed on 10—02-2013
8. Deshta Sunil (Dr.)& Singh Partap (Dr.), *Human Rights in India*,(2004),p.1 Edn.1<sup>st</sup> Allahabad Law Agency
9. <http://www.citelegal.com/13-human-rights-history.html> accessed on 14-02-2014
10. See [http://avalon.law.yale.edu/18th\\_century/rightsof.asp](http://avalon.law.yale.edu/18th_century/rightsof.asp). The Declaration contains 17 Articles defining various rights
11. Article 1 provides that men are born and remain free and equal in rights. Social distinctions may be founded only upon the general good.
12. Article 4 provides that liberty consists in the freedom to do everything which injures no one else; hence the exercise of the natural rights of each man has no limits except those which assure to the other members of the society the enjoyment of the same rights. These limits can only be determined by law.
13. Article 11 stated that the free communication of ideas and opinions is one of the most precious of the rights of man. Every citizen may, accordingly, speak, write, and print with freedom, but shall be responsible for such abuses of this freedom as shall be defined by law.
14. Law is the expression of the general will. Every citizen has a right to participate personally, or through his representative, in its foundation. It must be the same for all, whether it protects or punishes. All citizens, being equal in the eyes of the law, are equally eligible to all dignities

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and to all public positions and occupations, according to their abilities, and without distinction except that of their virtues and talents. (Article 6)

15. See Virginia Declaration of 1776, The Constitution of the US of 1787, American Bill of Rights 1789, The Geneva Convention 1864,
16. The use of force by one or more States to stop the maltreatment by a State of its own nationals was deemed to be lawful when that conduct was so brutal and large scale as to shock the conscience of mankind
17. The State by entering into a treaty may internationalize a subject which would otherwise not be regulated by international law
18. The Covenant of the League of Nations was formed in 1920. Article 22 established the mandates system by which the former colonies of the States which had lost the 1st World War were transformed into so-called mandates of the league and placed under the administration of various victorious powers.
19. Ibid
20. Member states of the United Nations pledged to promote respect for the human rights of all. To advance this goal, the UN established a Commission on Human Rights and charged it with the task of drafting a document spelling out the meaning of the fundamental rights and freedoms proclaimed in the Charter. The Commission, guided by Eleanor Roosevelt's forceful leadership, captured the world's attention. On December 10, 1948, the Universal Declaration of Human Rights (UDHR) was adopted by the 56 members of the United Nations. The vote was unanimous, although eight nations chose to abstain.
21. It contains 30 Articles. The rights enshrined under it include equality for all (Art. 1), Life, liberty and security (Art. 3), prohibition of inhuman treatment (Art. 5) and arbitrary arrest (Art. 9), fair and public hearing (Art. 10), right to privacy (Art. 12), asylum (Art. 14), marry (Art. 16), own property (Art. 17), social security (Art. 22), rest and leisure (Art. 24), a standard of living adequate for the health and well-being of himself and of his family (Art. 25), education (Art. 26), participation in cultural life (Art. 27), and freedom of movement and residence (Art. 13), thought, conscience and religion (Art. 18), opinion and expression (Art. 19), peaceful assembly and association (Art. 20) and presumption of innocence until guilt is proved (Art. 11)
22. See generally International Convention on the Elimination of All Forms of Racial Discrimination (1965)
23. International Covenant on Economic, Social and Cultural Rights (ICESCR) and the International Covenant on Civil and Political Rights (ICCPR) (1966). The ICCPR focuses on such issues as the right to life, freedom of speech, religion, and voting. The ICESCR focuses on such

- issues as food, education, health, and shelter. Both covenants trumpet the extension of rights to all persons and prohibit discrimination.
24. Donnelly, J. (1999): The social construction of international human rights. In Dunne, T. & Wheeler, N.J. (eds.): Human rights in global politics. Cambridge : Cambridge University Press: 71–102.
  25. Resolution 1235 of 1967 authorized the UN Commission on Human Rights to make a thorough study of situations which reveal a consistent pattern of violations of human rights as exemplified by the policy of apartheid as practised in the Republic of South Africa and racial discrimination as practised notably in Southern Rhodesia and Resolution 1503 of 1970 empowered the UN Sub-Commission on prevention of Discrimination and Protection of Minorities
  26. Convention Relating to the Status of Refugees, 1951
  27. Convention on the Elimination of All Forms of Discrimination against Women, 1979
  28. Convention on the Rights of the Child, 1989
  29. For example, African states have created their own Charter of Human and People's Rights (1981), and Muslim states have created the Cairo Declaration on Human Rights in Islam (1990).
  30. Jimmy Gurule, Geoffrey Corn, '*Gurule and Corn's Principles of Counter-Terrorism Law (Concise Hornbook Series)*' P.57 (Thomson Reuters 2011)
  31. Supra 30
  32. J John O'Brien, '*International Law*' P.6 (Cavendish Publishing Limited Edn.2001)
  33. J.S Starke, "Introduction to International Law". 10<sup>th</sup> ed. 1989
  34. Article 3 states that: Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed hors de combat by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, colour, religion or faith, sex, birth or wealth, or any other similar criteria. To this end, the following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above-mentioned persons: violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and torture; taking of hostages; outrages upon dignity, in particular humiliating and degrading treatment; and the passing of sentences and the carrying out of executions without previous judgment pronounced by a regularly constituted court, affording all the judicial guarantees which are recognized as indispensable by civilized peoples. The wounded and sick shall be collected and cared for.

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35. J. Moreillon, "The fundamental principles of the Red Cross, peace and Human Rights". Geneva-ICRC.1980
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37. Marco Sassoli, A Bouvier, "*How Does Law Protect In War?*" ICRC-1999) P.264
38. Derogation of rights to be limited to specific circumstances, certain rights may not be derogated from and derogation must be consistent with certain rules.
39. Article 6 of ICCPR,1966
40. Article 7 of ICCPR,1966
41. Article 8 of ICCPR,1966
42. Article 9 of ICCPR,1966
43. Article 10 of ICCPR,1966
44. Article 17 and 18 of ICCPR,1966
45. The main justification of the continued applicability of humanitarian law is that most of the rules have as their aim the protection of the vulnerable in armed conflict and that these rules can, be applied in practice only if they are applicable to both sides. Further, as with human rights philosophy, humanitarian law has as its major premise the applicability of protection of all persons, irrespective of whether the individuals are perceived as ."good" or "bad".
46. P. L. Mehta and S. S. Jaswal, "Human Rights: Concept and Ideology", 30(1&2) Indian Socio Legal Journal (2004) at 83-85.
47. Human Rights (J. R. Pennock and J. W. Chapman, New York: New York University Press, 1981) at 19-21.
48. The articles are too numerous to list individually, but the majority is to be found in the Third and Fourth Geneva Conventions and their Additional Protocols.
49. Article 34, Third Geneva Convention, and Articles 27 and 38(3), Fourth Geneva Convention.
50. Article 3 lays down the basic rules which States are required to respect when confronted with armed groups on their own territory.
51. Although the Lieber Code did make some mention of forms of protection that could be accorded in civil wars, treaty law did not do so until common Article 3 of the Geneva Conventions.
52. ICJ Reports 986, p. 112. ut there are certain reasons why humanitarian laws are not always respected and violations are not always repressed?
53. Amnesty international, report on torture(1973)

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# E-banking: Evolution, Status and Prospects

Rahul Ranjan Singh

## Introduction

The advent of E-Business accompanied with technological innovations and globalization is constantly propelling the businesses organization to redefine their business operations in terms of value chain reengineering and restructuring business models. Likely, the financial sector is metamorphosing under the impact of competitive, regulatory and technological forces (Jeevan, 2000). Financial institutions especially the banking sector is currently in a transition phase (Cronin, 1998). The banks have put themselves in the World Wide Web to take advantage of the internet's power and reach, to cope with the accelerating pace of change of business environment. The famous quote by Bill Gates that banking is vital to a healthy economy, but banks themselves are not highlights the crucial nature of the electronic forces that are affecting banks more than any other financial service provider group. This transition of business operations by banks have crated new mode of operation called E-Banking.

This paper represents the E-Banking phenomenon from its scratch to its future states. The first section of this study contains a guideline as what to expect from the paper. The second section contains a detailed analysis on the theory, evolution and present condition of E-Banking world wide. The last section contains some effective recommendations for the government on developing and maintaining an effective enabling environment for E-Banking and for existing banks and potential e-banks on how to develop and be successful in E-Banking business.

## *Objective of the Study*

E-Banking has been shaking and shaping the financial sector world wide. Thus it has become imperative to know the issue E-Banking in-

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depth: evolution, status and prospect. Thus the objectives of the study are to:

- To understand the issue E-Banking and its evolution.
- To analyse the viability and finding out suitable business model.
- To state the present situation of E-Banking worldwide.
- To recommend the government role on establishing E-Banking.
- To suggest the existing banks and potential e-banks on how to deal effectively with this new opportunity.

### ***Methodology***

A brief history of the banking industry worldwide, using document analysis has revealed concepts, evolution, competitive forces, business models, major barriers, impediments and drivers for the rapid transition of the banking sector and uptake of E-Banking. Neuman (1997) attributed document analysis to the systematic analysis of a particular topic, using newspapers, annual reports, employment records, unpublished and published articles, industry and consultancy reports, ongoing academic working papers, government white papers reports and white papers. Besides those sources internet is used extensively as a source of information.

### **E-banking**

The term Internet Banking or E-Banking Internet both are used as supplement. E-Banking is the one of the major part of E-Financing. Hertzum et al. (2004) defined E-Banking as web-based Banking. In other words E-Banking refers to the banking operations, which is done over World Wide Web. However, more comprehensive and well-established definition is given by the United Nations Conference on Trade and Development (UNCTAD). This definition covers almost all area of E-Banking.

*Internet banking refers to the deployment over the Internet of retail and wholesale banking services. It involves individual and corporate clients, and includes bank transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others (UNCTAD, 2002).* E-Banking information architecture is modelled as client-server architecture. A client operating through a PC linked to Internet opens the special E-Banking site of his bank and then, using a set of special secure numbers, gets access to his bank accounts and has the opportunity to consult them, as well as to make all necessary payments and transfers form his personal accounts. When the transaction number is exhausted the

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bank sends him a new set of numbers for his individual transfer sessions. In some cases the bank provides customized software. The bank software program can also be utilized offline, for example for preparing the payment orders offline and then making the actual order online. The client receives all numbers separately, mainly by mail. The bank also provide clients with similar facilities in its premises so that clients can use the bank equipment such as an ATM or a special facility linked to the main terminal facility called Multimat, permitting them to effect the same account examination, payment and transfer operations without consulting the bank staff.

### ***Evolution***

Since the late 1990s E-Banking has developed from virtual insignificance to tens of millions of users worldwide (OECD, 2001). However, E-Banking is the product of different generations of electronic transactions. The current web-based internet or E-Banking is the latest of several generations of systems: *Automated Teller machine (ATMs)*, *Phone Banking*, *PC or House Banking*. Automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers where as in phone banking, users call their bank's computer system on their ordinary phone and use the phone keypad to perform banking transactions. PC banking superseded phone banking and allowed users to interact with their bank by means of a computer with a dial-up modem connection to the phone network. Phone and PC banking entailed maintenance costs associated with keeping up to date with diverse modems and with avoiding prohibitively complex installation procedures. After those generations Deutsche Bank launched the very first Internet banking project in Latin

America in 1996 and Citibank has developed a special "e-toolkit" across all its branches worldwide (UNCTAD, 2002). E-Banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has a potential for reducing maintenance costs. For users, E-Banking provides current information, 24-hour s-a-day access to banking services. The primary services provided by e-banks are transferring money among one's own accounts, paying bills, and checking account balances. Loans, brokering, share trading, service bundling, and a host of other financial services are being added to these primary services. E-Banking is widely used in, among other places, the Nordic countries. In 2001, E-Banking was used by more than 25% of the population in Norway, Sweden, and Finland, and by 15% of the population in Denmark (OECD, 2001). In 2004, E-Banking usage in Denmark had grown to 45% (Statistics Denmark,

2004). Jeevan (2000) notes that with rigid controls giving way to deregulation, banks are gearing up their communications infrastructure to obtain a competitive edge from E-Banking, which is fast becoming a reality in India. Nair (1999) points out that E-Banking is fast becoming a strategic necessity for most commercial banks, as competition increases from private banks and NBFIs.

### **E-banking Opportunity and Challenges**

According to the “E-Commerce beyond 2000”, the banking and finance sector has been a rapid adopter of E-Commerce because its products could easily be virtualized and the product had priority over place (NOIE, 2000). Yerkes (1998) observes that banks can generate revenue through increased account access fees, and benefit from promotional opportunity to cross-sell products such as credit cards and loans. Whereas Stamoulis (2000) observed that banks initially promoted their core capabilities, such as products, channels and advice, through the Internet, Yerkes (1998) argues that, due to the relative newness of this rapidly growing industry, banks as well as consumers had serious concerns about the security of Internet access to client accounts, which was the biggest challenge (Denny 2000). The advances in Internet security and the advent of relevant protocols such as Integriion, OFX, SET, etc. has put banks in perspective again as financial intermediaries and facilitators of complete commercial transactions via electronic networks and especially via the Internet (Stamoulis, 2000). Consumers are increasingly looking for services they can access from a single entry point. As Denny (2000) observes, awareness of competition has motivated banks to move aggressively in seeking alliances and establishing joint ventures to maintain their claim to this part of the Ecommerce infrastructure. Like there are alliances in the ATM network, Group Network, Money Transfer Network etc. This is also creating segmentation of networks where the customers of this networks sometimes unable to access to others’ network. Seitz and Stickel (1998) note that consumer behaviour in banking changed partly as a result of changes in the amount of spare time available to individuals. Mobility, independence of time and place, and flexibility has become key words in consumer banking. Timmers (2000) supports this view, highlighting the key features of the Internet – such as 24 hour availability, almost immediate access, and the absence of physical borders. Indeed, the Internet has been one of the key drivers in

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promoting E-Commerce in the banking sector (Jeevan, 2000). The opportunities for banks in the Internet arena are varied (Stamoulis, 2000). Despite this plethora of opportunities, threats to the e-banks abound. One major threat to banks is the “Internet only” virtual banks. With US\$ 2 million, one can set up a fully-functional, Internet Only bank and provide payment services on the Internet.

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# Gender Inequality: The Way to Empowerment

Dr. Henna Tabassum

In the summer of 1987, The *New York Times* reported that there have been enormous changes in public attitudes about men's and women's roles over the last decade. Based on surveys by the major polling organisations, including Louis Harris and Associates, the Gallup Organisation, and the Roper Organisation, the *Times* reported that 63 per cent of women now say they want to combine a career, marriage, and children (compared to 52 per cent a decade ago). During the last 10 years, the number of women who say they look forward to marrying and having children, but not having a career, has dropped from 38 per cent to 26 per cent. Half of all women and men say child care and taking care of the home should be a shared responsibility (though only 15 per cent of married women say that the chores in their households are evenly divided). Not surprisingly, sharing housework is more prevalent among spouses under 30 years of age. Finally, according to this report, three-quarters of all men and women believed that women's roles would continue to change, although women are more likely than men to prefer less rigid roles.

The report of these liberal changes in attitudes about men's and women's roles appeared on the same page as another article describing a group called Concerned Women of America. Claiming over half a million members, Concerned Women of America seeks to "steer the nation onto the path of traditional moral values based on the Scripture and to restore the family to its place as the pre-eminent unit of society."<sup>1</sup> This group is opposed to equal pay for comparable work, unisex insurance rates, company policies for parental leave, the Equal Rights Amendment, abortion rights, sex education, and the advertisement of condoms on television.

What is happening in this society that such divergent views about men's and women's roles are held during the same historical period?

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What changes are occurring in the status of men and women and how have these changes affected them across the society? Transformation of women's roles in society has been one of the most obvious social changes in recent years. More women have entered the paid labor force and have taken jobs previously characterised as "men's work." Men are beginning to share the responsibilities of housework and child care. And women and men alike are more likely to believe in women's rights to equal employment and educational opportunities. Still, many barriers to equality remain. By 1986, for example, although the gap between male and female earnings had narrowed, the median income for women with college degrees was still only equivalent to the median income for male high school dropouts (see Figure 7.1). And women who do enter male-dominated careers are still likely to experience discrimination.

What societal conditions perpetuate inequality between men and women? How have men's and women's views of their possibilities changed in recent years? What new policies are necessary if we want to create a society in which women's opportunities are no longer limited by sex discrimination? Sociologists who study sex and gender relations are interested in these questions. The sociological perspective sees gender as a culturally learned pattern of thought and behavior. Thus, while one is born male or female, social expectations vary for each sex, resulting in different roles for men and women in society. Although many of those expectations are changing, social institutions are still organised in ways that differentiate people by gender. This results in different structures of opportunity and reward for men and women in this society. From a sociological viewpoint, gender, like class and race, must be seen as a central category of social organisation and social experience. Sociologists see relations between the sexes as shaped by cultural, historical, and social systems which organise our personal relationships and distribute rewards and privileges? Moreover, a sociological perspective on gender relations understands that gender intersects with class and race relations; we cannot generalise the experience of white men and women to that of other groups.

'Although many aspects of men's and women's experiences have changed in recent years, women remain a subordinate group in this society. As we have already seen, other social problems are also shaped by the dynamics of gender, race, and class relations in contemporary society. High rates of violence against women, for example, stem from the equation of masculinity and power. The current high rates of poverty among women heading households are one indication of the precarious economic situation of women in a society where they earn less than

men and are tracked into sex-segregated occupations and family roles. In this chapter we examine the way gender identities are learned and how economic resources are distributed among women and men. We begin by clarifying some basic terms sociologists use to discuss gender relations.

### **Defining Sex and Gender**

Sociologists have traditionally differentiated the terms sex and gender to emphasise the social dimensions of gender relations. *Sex*, used to refer to one's biological identity as male or female, is not necessarily the same as *gender*—the socially learned behaviors and expectations associated with members of each sex. Normally, humans are born as either male or female, but learn to become masculine or feminine. For example, studies of newborn infants have found that, even controlling for objective measures such as size, parents describe their girl babies as softer, smaller, and less attentive, while parents of boys describe them as strong and alert.<sup>2</sup>

The distinction between sex and gender, like the distinction between biology and culture, is not a perfect one, but it emphasises that gender is a cultural, not a biological, category. Social expectations pattern male and female behavior and, often, what men and women expect of themselves. In addition, because social institutions are organised around gender inequality, the system of gender relations also patterns one's life chances and directs men's and women's social, economic, and political experiences.

The societal system of gender relations affects us on different levels, including individual subjectivity, social interaction, and institutional structures.<sup>3</sup> At the level of individual subjectivity, gender expectations can influence our self-definition, including our sense of competency, our self-esteem, and our emotional state of mind. For example, women who internalise traditional expectations of femininity may become dependent on men for their sense of self-worth. It is important to note, however, that not all persons, men or women, internalise sex-typed expectations to the same extent. In fact, rejection of gender expectations can be a source of resistance to the oppressive limitations imposed by traditional gender expectations.

At the second level of societal experience, that of social interaction, gender relations are easy to observe. Gender structures the social interaction of groups. Consider the example of touching. Research on patterns of touch indicates that men touch women more often and on more different parts of the body than women touch men.<sup>4</sup> Differences in oral communication, too, can be observed by sex. Researchers have pointed out women "work" more in conversations with men, meaning

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that they make more effort to keep the conversation going even though they have less control over what the conversation is about.<sup>5</sup> And studies of male-female conversations show that men interrupt women more often than vice versa, and that, in mixed sex groups, men spend more time talking than do women, despite sexist images to the contrary.<sup>6</sup> Since it is higher status people who are given more license to touch, interrupt, and dominate those of lower status, these patterns are indicative of the power relations between men and women in society.

Finally, at the social structural level gender patterns the distribution of privileges and the organisation of institutions. In education, for example, the majority of elementary school teachers are women, but the higher one moves in the educational system, the more likely it is that the teachers will be men. Not only do women receive fewer rewards, in terms of earnings and prestige, for the work they do as teachers, but the inequality conveys the misleading message that men make better educational leaders. Patterns of gender relations in public institutions also interest with gender relations in families. So, for example, the assumption that men are responsible for family earning while women are responsible for child care creates many strains for families since institutional supports for men to be more involved in child care are lacking, as is adequate day care for employed parents.

How does gender come to be so significant in social organisation? From birth we begin to learn the significance of gender in how we will think of ourselves, what others will think of us, and what our opportunities in life may be. Gender influences most aspects of our lives, including our health, attitudes, friendship patterns, and earning potential, to name just a few. Gender is so significant in structuring social relations that many people think that gender differences stem from biological differences between the sexes. But the idea that gender differences are social, not natural, in their origins is central to the sociological perspective.

### **Biology and Culture**

The belief that “biology is destiny” is a long-standing claim that, though it has little basis in fact, has influenced cultural beliefs about men’s and women’s abilities and character, and it continues to influence public concepts of gender inequality. For example, claims that women do less well than men in quantitative reasoning, though largely unsubstantiated by research studies,<sup>7</sup> discourage many women from pursuing studies in mathematics and statistics. The idea that male hormones make men more aggressive, though also scientifically

questionable, is popular and indicates that men, as well as women, are stereotyped by biologically determinist arguments.

*Biological determinism* and *biological reductionism* are theories that attribute gender differences to biological causes. A reductionist argument is one that reduces a complex event to a single cause. One example is the claim that women's capacity to bear children is the basis for their social status. A determinist argument is one that assumes that a given condition (for example, the presence of male hormones) inevitably produces a given result. Explaining sex differences as natural and inevitable consequences of biological differences between the sexes is both a biologically reductionist and determinist argument. Such arguments assume that one's biological nature is more significant than one's social experience in determining social identities and social privileges.

What is the reliable scientific evidence for biological differences between the sexes? While many biologically based claims have been made, one of the most common is the assumption that differences in aggression between men and women are caused by differences in the sex hormones. To begin with, research does not find consistent differences in levels of aggression between boys and girls or men and women. Furthermore, aggression is not consistently defined, either in the research literature or in people's minds. But suppose that we assume that boys are more aggressive than girls at an early age. Can this be attributed to differences in their sex hormones? After puberty, males do produce greater amounts of testosterone while in females the ovaries secrete additional estrogens and progestins. However, before puberty there are few or no differences in the sex hormones produced in either sex since all of the sex hormones are at very low levels. It is only logical to conclude that sex hormones explain little about observed differences between the sexes in the prepubescent period. Moreover, following menopause, women actually have lower levels of the so-called female hormones (estrogen and progestin) than do men; few have argued that older women are therefore less feminine than older men. And neither chemical castration of human beings nor actual castration of male rhesus monkeys results in a consistent reduction of male aggression. Taken together, we can conclude that hormonal influences are a poor explanation of observed social differences between the sexes.

*Sexually dimorphic traits* are those that appear in different frequencies between males and females. They include physical as well as social and cultural differences; for example, height is a sexually dimorphic trait since, among human beings, men tend to be taller than women. But, sexually dimorphic traits are not precise differences

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between the sexes. For most sexually dimorphic traits, variation within a sex group is greater than the variation across groups. Body weight provides an example. While, on the average, men weigh more than women, weight differences among men and among women exceed the weight difference between men and women as separate groups. Thus, while weight may be a sexually dimorphic trait, the difference may not be found among any given male-female pair.

Biological explanations of gender inequality assume that human biology is a fixed entity that does not change in response to social circumstances. Biological researchers know that this is not true. Even the simplest physical traits such as body size, weight, and height are known to be strongly influenced by the environment. More complex traits, such as intelligence and strength, are also strongly conditioned by environmental factors. Even those traits thought to have a genetic basis cannot be said to be solely genetically caused, since most genetic traits are known to interact with the environment in which they are found.

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# Microfinance and Women Empowerment

Dr. Prem Lata

## Abstract

This study attempts to understand the impact of microfinance schemes on women empowerment, in terms of changes in income, savings, socio-economic status, and political participation. The study was conducted on a sample of 220 women beneficiaries of microfinance services of a leading MFI operating in Kerala state. The sample was selected by multi-stage cluster sampling.

The results of the study show that microfinance programmes have created a positive impact to its beneficiaries. Majority of the respondents are engaged in various income generating activities because of the credit facilities provided by microfinance institutions. This resulted in a significant change in their income level and savings after participating in microfinance programmes. This has helped them to earn income for their family and also enabled them to play an important role in their family and also in society.

**Keywords:** microfinance schemes, women empowerment, socio-economic status, political participation.

## Introduction

The role of microfinance in India is increasing mainly because of the influence of two factors. The first is that microfinance meets the financial requirements of low income group of people. The second is that microfinance is considered as an important tool for financial inclusion by the policy makers in India. The microfinance sector is considered as a commercially viable solution to overcome various issues in attaining financial inclusion, reducing poverty level and empowerment of women has become the primary obstacle in achieving these goals.

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The impact of microfinance schemes has been a very widely-studied area in recent years. Several recent studies have studied the impact of participation in microfinance schemes on women empowerment (Sarkar and Baishya, 2012; Prabhakara, 2012; Hosseini et al, 2012; Gowda and Manjula, 2012; Shanthi and Ganapathi, 2012; Das, 2012; Nessa et al, 2012). All these studies have highlighted the potential of microfinance institutions and microfinance services as a means to solve the financial constraints of women especially in rural areas. Microfinance services are availed in a big way by women across the country. Microfinance is considered as a powerful instrument for the women empowerment. This study extends the literature by investigating the impact of microfinance services on rural women empowerment, socially, economically, and politically.

### Methodology

The data for the study was collected through structured questionnaire which is distributed to women beneficiaries who have taken microfinance services from a leading MFI operating in Kerala. The sample size for the study was 220 microfinance beneficiaries, selected through multistage cluster sampling, in eight villages of Malappuram district, Kerala.

<i><b>Social</b></i>	<i><b>Economic</b></i>	<i><b>Political</b></i>
status of family in society	income level	legal rights
ability to discuss freely with government officials/other institutions	savings	awareness about government programs and policies
literacy level	standard of living	undertake government or other procedures independently
ability to protect against social evils	access credit	clear view about political parties
awareness regarding health and sanitation	awareness about banking products/ financial schemes of government	participation in Grama Sabha meetings regularly
make independent decisions regarding personal issues	undertake banking transactions independently	awareness about policies of political parties
ability to express views	changes in assets (gold, electronic items, land etc.)	awareness about policies of local, state and central government
position in family		cast vote independently
role in decision making		participate in rallies and meetings of political parties
make decisions about children's requirements		
make decisions about children's education		

In order to analyse the impact of microfinance schemes on women empowerment, the questionnaire was structured in a way to measure three dimensions of empowerment, viz. the Social, Economic, and

Political dimensions, as detailed below. The responses on each of these variables was collected on the basis of a five-point Likert scale.

## Findings

The various income generating activities taken up by women under microfinance schemes among the respondents are discussed in the following. The respondents were mainly engaged in eight types of income generating activities from the loan amount received from the MFI. The most prevalent was tailoring and laundry activities (18.2%), followed by agriculture/farming related activities (17.7%). Book binding (12.7%) and packing (11.8%) were also prevalent. Animal husbandry/cattle rearing or related activities (10.9%) and food related activities (10.9%) were also prevalent. Handicrafts (10.5%) and shops (7.3%) were relatively less prevalent. These are the various income generating activities carried out by women under microfinance schemes. The success of each activity is directly dependent upon the activities of the MFI, which provides training and skill development programmes, and also helps in marketing the products made by the members.

*Table 1: Women empowerment: social, economic, and political*

	Mean	Std. Dev.	% (highly improved)	t Stat	p-value
Status of family in society	4.49	0.797	94%	27.759	0.000
Literacy level	4.43	0.833	93%	25.425	0.000
Discuss freely with government officials and other institutions	4.43	0.860	91%	24.626	0.000
Health and sanitation	4.39	0.812	89%	25.408	0.000
Make independent decisions regarding personal issues	4.39	0.860	90%	23.897	0.000
Protect against social evils such as alcohol, sexual abuse, social injustice	4.39	0.887	91%	23.253	0.000
Express views	4.38	0.832	90%	24.546	0.000
Position in family	4.36	0.878	88%	22.973	0.000
Role in decision making power	4.34	0.900	87%	22.096	0.000
Make decisions about children's requirements	4.31	0.909	83%	21.359	0.000
Make decisions about children's education	4.30	0.957	84%	20.218	0.000
Income level	4.57	0.740	95%	31.425	0.000
Savings	4.53	0.761	94%	29.767	0.000
Standard of living	4.51	0.785	95%	28.599	0.000
Ability to access credit	4.44	0.788	93%	27.024	0.000
Awareness of banking products/other financial schemes of government	4.43	0.827	93%	25.594	0.000
Undertake banking transactions independently	4.42	0.859	90%	24.559	0.000
Change in assets (gold, electronic items, land etc.)	4.41	0.853	91%	24.580	0.000
Awareness regarding legal rights	4.45	0.806	92%	26.593	0.000
Awareness about policies of local, state and central government	4.39	0.834	90%	24.670	0.000
Awareness about policies of political parties	4.37	0.826	91%	24.648	0.000
Ability to undertake government or other procedures independently	4.37	0.868	90%	23.367	0.000
Participation in Grama Sabha meetings regularly	4.36	0.908	89%	22.197	0.000
Clear view about political parties	4.35	0.906	90%	22.028	0.000
Participate in rallies and meetings of political parties	4.35	0.891	88%	22.405	0.000
Awareness about government programs and policies	4.34	0.874	88%	22.746	0.000
Ability to cast vote independently	4.33	0.928	87%	21.223	0.000

There was a high perception of social empowerment with participation in microfinance schemes. Most of the respondents (more than 80%) perceived improvement in all the aspects of social empowerment. The highest perception of improvement was with respect

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to status of family in society. There was also a very high perception of improvement in literacy level and ability to discuss freely with government officials and other institutions. There was a high perception of improvement in health and sanitation, ability to make independent decisions regarding personal issues, and protection against social evils. There was also a high perception of improvement in their ability to express their views, their position in family, their role in decision making power, ability to take decisions on children's requirements, and their ability to take decisions on children's education. Thus, participation in microfinance programmes has improved the social empowerment of women.

There was a high perception of economic empowerment with participation in microfinance schemes. Most of the respondents (more than 90%) perceived improvement in all the aspects of economic empowerment. The highest perception of improvement was with respect to income level, followed by savings, and standard of living. There was also a very high perception of improvement in ability to access credit, awareness of banking products and other financial schemes, ability to undertake transactions independently, and change in assets. Thus, participation in microfinance programmes has improved the economic empowerment of women.

There was a high perception of political empowerment with participation in microfinance schemes. Most of the respondents (more than 85%) perceived improvement in all the aspects of political empowerment. The highest perception of improvement was with respect to awareness of legal rights, followed by awareness about policies of local, state, and central government. There was also a high perception of improvement in awareness about policies of political parties, ability to undertake government or other procedures independently, and participation in Grama Sabha meetings. There was a high perception of improvement in awareness about political parties, participation in rallies and meetings of political parties, awareness about government procedures and policies, and ability to cast vote independently. Thus, participation in microfinance programmes has improved the political empowerment of women.

There was found to be a shift from informal sources of credit (money lenders, relatives/family, friends, and others) to formal savings instruments (banks/post office/government institutions, and MFIs), with 95.7% of respondents who earlier preferred informal sources of credit have shifted to formal sources of credit. There was also found to be a shift from informal savings instruments (money lenders, investing

in gold/silver/etc., cash at home, and others) to formal savings instruments (banks/post office/government institutions, and MFIs), with 85.4% of respondents who earlier preferred informal savings instruments have shifted to formal savings instruments. There was found to be a clear shift in the income level, with a significant increase in income as result of participating in microfinance programmes ( $z_{cal} = 12.668$ ,  $p = 0.000$ ), with no improvement of income level in only 8.7% of cases. There was also found to be a clear shift in savings, with a significant increase in savings as result of participating in microfinance programmes ( $z_{cal} = 12.144$ ,  $p = 0.000$ ), with no improvement of savings in only 13.2% of cases.

## **Discussion**

The results of the study suggest that microfinance programmes have created a positive impact for its beneficiaries. Majority of the respondents are engaged in various income generating activities because of the credit facilities provided by microfinance institutions. This has helped them to earn income for their family and also enable them to play an important role in their family and also in society. There has been a significant improvement in their income and savings after participating in microfinance programmes.

Microfinance has also reduced women's dependence for informal financial sources. Before joining microfinance programmes, majority of women were depending upon informal financial sources for availing loans or to meet their financial requirements. On the other hand, after joining microfinance programmes, they became more aware about the benefits that they receive from formal financial sources, and also the illegal practices followed by informal sources. This made them shift from depending informal sources to formal financial sources. This was also same in the case of savings. Before joining microfinance programmes majority of women were putting their savings into informal financial instruments. On the other hand, after joining microfinance programmes, they shifted towards formal financial instruments.

It was also found that microfinance programmes have empowered women socially, economically, and politically. Most of the respondents (more than 80%) have indicated there was a significant improvement in their social, economic and political empowerment after joining microfinance programmes.

To conclude, microfinance schemes have helped women to become "more creative, intelligent, innovative, proactive, inclined toward planning, and better organized." They gain self-confidence and, with

that, an increased ability to make decisions and mold their own lives. Microfinance builds mutual trust and confidence among women, which will encourage them to approach formal financial institutions to meet their various financial requirements. Thus, microfinance programmes are an important strategy for women's empowerment.

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# Land Tenure System in India: A Historical Perspective

Dr. Meena Sinha

## Introduction

The history of mankind is intimately associated with land relationship. The role of the State had been the most controlling factor in augmenting the land resources. In agrarian economy the land is the principal source of government revenue and also the major occupation of the people for subsistence. It holds true even today in modern India. The level of Indian economy is largely decided by the status of land.

Frederic Engels in his classical treatise on 'Origin of Family, Private Property and State', discussed how the land relations activated the social transformation. Individual rights on holding/ inheritance of land is a major event of social history. The king and the ruling elite were dependent on income from land and so controlled the entire land holding, either directly or indirectly. Sometimes the land disputes led to war on a local or regional scale. Institutions framed rules for systematic distribution of lands. Institutional framework had been different on temporal and regional scale. Technology also played a key role in devising modalities for prospective utilisation of land initiating cascading effect for social and economic transformation.

## Significance of Land

Land is a fixed asset on the surface of the earth. It can neither be enlarged nor reduced under natural conditions. But the land surface, when subject to human use, may be deteriorated. The deterioration of land may lead to many maladies, including abandonment of its use for prospective agriculture and other functional uses. Being a fixed asset land deserves regulations for optimum utilisation.

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The pressure on land is ever increasing. The population explosion in the later half of the twentieth century has caused several constraints for the utilisation of lands. The experts are recommending appropriate policies for scientific use of lands. For framework of such policies we require relevant information on lands, which are usually available from land records and other sources.

### **Importance of Land Records**

Land records are of great importance. Land information from the basis for assignment and settlement of land titles, which are subject to legal scrutiny. The holding of land is controlled by statutory laws by the state at a given point of time. The access to land is determined by ownership patterns, based not only on statutory laws, but also on customary laws in many cases. India has a long tradition of customary laws in diverse regions of the country. The land tenure systems were different in different historical periods, as the form of institutions changed in the historical context. The land tenure systems laws in many cases. India has a long tradition of customary laws in diverse regions of the country. The land tenure systems were different in different historical periods, as the form of institutions changed in the historical context. The land tenure systems also differed from region to region. This holds true even today due to prevalent diversity of the country like India. The importance of land records was recognised even in the past, as it is today. The state largely depended on land revenues for administrative, military and other necessary expenditure. In a democratic polity there have been more stress in evolving a comprehensive system for land management. At various stages of history the level of technology played a significant role in devising the modalities for land records.

### **History of Land Records**

#### ***Pre-British India***

We have little understanding on land records and tenure system prior to Muslim rule in India. The land belonged to “King” and the property rights of individuals were not specified. Vincent Smith observed, “The native law of India has ordinarily recognised agricultural land as being crown property”. (Smith, 1924) The observation by Vincent Smith was also contested. The Arthashastra (Kautilya) has evidence of the cultivator being able to sell and alienate his land But it also states of the right of the king to replace him in his holding if he fails to pay the rent. This is like a double ownership, as prevalent in British India. In many cases the land also belonged to the community or headman of the village.

Muslim ‘rule’ in India continued from the thirteenth to the eighteenth century. Exception for a few decisions concerning the giving of land as

gifts to relatives, generals, or artists, the State's fundamental interest was with assessing, measuring, and collecting the Sovereign's share of the revenue generated from agricultural production. As long as this revenue was collected without much trouble most, though certainly not all, aspects of village life were left to local elites, traditions, and culture. The village had more autonomy in the Mughal period than in the British Raj. The British historian W.H. Moreland defines it as "administrative Philanthropy". (Moreland, 1929). During the rule of Muslim the king used to collect tax from the land, but the propriety was vested to the peasant, the tiller of land. "The King's right to levy tax was justified by the fact that he gave his subjects protection: there is no suggestion here of the king's right to eject the peasant from his holding; the peasant's right is based on the same basis as the merchant's right to merchandise; as the payment of a tax did not interfere with the proprietary rights of a merchant, similarly the peasant did not lose his right over holding because he paid a tax." (Quereshi, 1956).

This attitude of the Muslim ruler towards the holding by the peasant was natural, as the Muslim legal system recognised that the cultivator was the owner of the land. The ownership of the land by the peasant was such an established principle in Muslim law that hitherto it had never been questioned. The Mughals organised that land revenue system following the footholds of Sher Shah Suri. They found the principal structure of agrarian base well established. The Mughals during the reign of Emperor Akbar, the great Mughal, moderately revised and integrated the system for efficient land revenue collection. They understood that in a dominant agrarian economy the organisation of land administration would be more effective. The Mughals introduced the systems of sharing, appraisal and measurement.

Emperor Akbar considered such agrarian reforms as important task for his own reasons. The Mughal empire during his reign was expanding and he had to maintain large number of officers for military and administration. Akbar introduced the Mansabdari system and tied the system, with land revenue collections. He was compelled to initiate, reforms in administration and land revenue system, otherwise the conditions threatened to be more chaotic.

Akbar's mission was fulfilled by his trusted officers like Raja Todarmal and Muzaffar Khan who effected a major change in the system of revenue collection. Raja Todarmal was instrumental in survey. A compendium of land records was prepared through collection of data from the field and entered in a register.

It was really a beginning of systematic land records in India for which the British also owe to the Mughals. The dahshala or 10 year revenue system (Census) was the contribution of Raja Todarmal, who along with Diwan Shah Mansur divided the Mughal empire into 12 provinces, each administered by a governor and a Diwan. On the basis

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of land survey Raja Todarmal prepared the maps showing different holdings and assessed rents, which probably were the first cadastral maps in India. In 1571 he introduced the rational revenue assessment based on intimately surveyed land holdings.

It was a revolutionary task in the context of technological level, then prevalent in India. The contribution was no less worthy in the historical context, when at the same period Mercator in 1669 published his world map, using conformal projection in his chart showing 'waxing latitudes'. Mercator was endowed with expanding horizon of scientific knowledge in Europe in the late 16th century, where Raja Todarmal had many hurdles. The Mughals applied new techniques for land survey. Firstly, they adopted standard units of measurement. A yard, called a Gaz, was introduced consisting of forty one digits. A bigha was measured as equal to an area sixty yards square. The reform was not only confined in adopting a new scale, but in standardising the existing ones. The old practice of measuring length with a rope was replaced with bamboo poles. Because the rope used to shrink when it came in contact with moisture. Instead 'Bamboo rods joined together with iron rings were used which were less affected by moisture'. (Abul-Fazl (Ed. Beveridge), 1939). The Mughals under the leadership of Raja Todarmal, the revenue and finance minister of Akbar, also instituted the classification of lands for assessment of revenues. The assessment of rent varied for different types of land. Basically the length of the period of cultivation was considered for a land classification. Where a land had been continuously cultivated, it was classified as Polaj land. When it was left uncultivated for a short period to regain fertility it was defined as parauti. When a land was not cultivated for a stretch of three to four years, it was categorised as Chachar. The wastelands, abandoned for cultivation for many years, were called the Banjar.

The land revenue was highest for the Polaj lands, as the yields were usually high from such lands. The parauti land when cultivated was charged the same revenue that of Polaj land. The Mughals encouraged the conversion of wastelands into cultivated lands. The Banjar lands, when brought under cultivation, used to pay nominal taxes in the initial years. The Chachar land was treated similarly like the Banjar land.

The Mughals were keen to expand cultivated area and extended special concessions to the cultivators for bringing new areas under cultivation. The new areas were shown separately in the statements submitted to the higher authorities. The authorities were vigilant to expand the cultivated land, in no case the cultivated land should be permitted for degradation into chachar and Banjar lands. The land policy of Akbar was peasant's friendly. He introduced the quality assessment to ensure enhanced land revenue for his expanding empire. But in no case he overburdened the cultivators. The officers were given farman to protect the crops and interest of the peasants. The peasant society in pre-British India had more autonomy and was adored with respect and admiration.

## **British India**

The British domination over Indian land started in the seventeenth century and by the end of that century the British rule extended over large areas with the fall of Mughal empire, defeat of the Marathas and subjugation of local powers. The British inherited the institutional form of agrarian system from the Mughals. The British superimposed a system over the existing pattern in tune with British customs and laws relating land. Broadly three principal types of land revenue system were introduced in British India. The basic characteristic of each system was the attempt to incorporate elements of the preceding agrarian structure. The interaction of colonial policy and existing systems produced widely different local results and hybrid forms. It is interesting to note that the techniques used in land surveying in many parts of India even today remain substantially unchanged since their introduction by Raja Todarmal during the reign of Mughal Emperor Akbar.

Different land revenue systems were introduced in various parts of British India, as the British annexed different parts of India in various periods. Let us have an introduction into three broad land revenue systems introduced by the British. These land revenue systems are (1) Zamindari System, (2) Ryotwari System and (3) Mahalwari System.

### **Zamindari System**

The Zamindari system was introduced in early British period. The Permanent settlement Act was passed in 1793 and initially introduced in Bengal. The system was also found in large parts of Northern India (except Avadh, Agra, Jaipur and Jodhpur), Bihar and Orissa. The system was introduced to ensure the revenue receipt of the British colonial power, where a Zamindar was declared the proprietor of land on condition of fixed revenue payments to the British regime. The peasants were turned into tenant farmers and deprived of the land title including other rights and privileges enjoyed during the Mughal period.

The Zamindars collected the rents of land through different intermediate collectors. As a result of such practice there had been creation of multilevel ranks of collector under the Zamindar. The peasantry was subject to deprivation of his share in produce from land and relegated to abject poverty. This revenue system accounted for 57 per cent of cultivated area in the country. The Flood Commission, inquiring the reasons of the Great Bengal Famine in 1943, recommended the abolition of intermediaries on land interest to the British Government.

### **Ryotwari System**

The Ryotwari system was introduced in Madras Presidency in 1792 and in Bombay Presidency in 1817-18. This system recognised the proprietary right of the peasant on land and resembled the revenue system of the Mughal to a great extent. The system covered nearly all the southern states and many western states of India including the

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erstwhile Central Province (*i.e.* Madhya Pradesh). Even the princely states of Jaipur and Jodhpur had this category of revenue system, as it existed during the Mughal period. However, the pockets of Zamindari prevailed within the Ryotwari regions, particularly in the princely states and the areas governed by the feudal lords. The Ryotwari system covered nearly 38 per cent of the cultivated area in India.

### Mahalwari System

The Mahalwari system was introduced between 1840 and 1850. In this system the entire village constituted revenue settlement as collective unit. The peasants paid the revenue share of whole village in proportion according to their individual holdings. The system covered the erstwhile Punjab, parts of Orissa and Madhya Pradesh, and the princely states of Awadh and Agra in Uttar Pradesh. The System was not extensive and included only 5 per cent of the cultivated land in India.

Of the three systems the Ryotwari resembled the Mughal revenue system, wherein the proprietary rights of the cultivators had been recognised. This system is considered to be most convenient and appropriate instrument for social development. However, the British legislation institutionalised the transfer of land and created the base of land-market, which was almost absent in the Mughal period. The legislation enacted during 1850s in Ryotwari and Mahalwari areas enabled money-lenders to recover debts from the mortgaged land holdings. It caused serious impact on transfer of land from the holding of cultivator to non-cultivator. "As a result, rural society in Ryotwari and Mahalwari areas was polarised into landlords and rich peasants versus tenants and agricultural labourers, and the distribution of land became highly unequal".

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