

Performance of Integrated Watershed Management Programme (IWMP) in Social Inclusion in Wokha District of Nagaland, India

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ABSTRACT

In spite of the consistent and high economic growth, India has frequently been experiencing poverty, social exclusion, untouchability, inequality and unemployment. To address and mitigate all the unhealthy social issues and to achieve social inclusiveness various endeavours have been introduced in the country since independence. Integrated Watershed Management Programme (IWMP) is one such initiative introduced in the country to achieve the social inclusion, to reduce the poverty, to up-scale the rural livelihood as well as to conserve the natural resources. This paper is an attempt to examine the performance of IWMP to up-scale the social inclusiveness of beneficiaries in Wokha, Nagaland, India. In this study 114 beneficiaries of IWMP are included as respondents. Important 5 aspects of social inclusiveness are included in the study. Further, 35 issues are included to examine the performance of IWMP in up-scaling of social inclusiveness, and of which 8 issues are included under social aspect, 10 issues each under physical and economic aspects, 5 issues for gender aspect and 2 issues under political aspect. Results indicate that performance of IWMP is highly significant in respect of improvement of social, physical, economic and gender aspects of social inclusiveness of beneficiaries and highly significant in terms of up-scaling of overall social inclusiveness. The two tailed Z-value of overall social inclusiveness is -9.0157, Z-critical of 1.96 and p value of 0. Study also proves that majority of the beneficiaries (i.e., 63 %) have moderately benefitted and another 23% of beneficiaries are greatly benefitted from the IWMP.

Keywords: IWMP; Performance of IWMP; Social inclusion; Z-test;

Social inclusion was first developed in France in reference to the concept of social exclusion to describe the situation of sub-groups within the population who did not have access to adequate social security (Peace 2001; Hayes et al. 2008). It was then adopted by the European Union (EU) during the 1980s as part of its Programme to Foster Economic and Social Integration of the Least Privileged Groups, followed by the European Observatory in early 1990s to Combat Social Exclusion (Hayes et al. 2008; and Hulse and Stone 2006). As such promoting social inclusion has become a global phenomenon in the development scenario.

Social inclusion has been defined as a process in which those at risk of poverty and social exclusion gain the opportunities and resources that are needed to fully

participate in societal activities (Frazer and Marlier 2013). It is understood as a term by which efforts are made to ascertain equal opportunities for every individual irrespective of their status. It centers on full participation of the individual in a society in all aspects of life, be it political, social or economic activities (UNDESA, 2007). Social inclusion is a situation where individuals or people belonging to a particular community do not face certain negative effects of unemployment, poor skills, poor housing, low income, low education, ill health, family problems and limited access to services (CESI, 2018)

At the core of most definitions of social inclusion lies the concept of full participation in all aspects of life. Participation is most significant as it denotes an active

involvement in the process, not merely having access to society's activities, and building and maintaining a social network. Participation also creates a sense of responsibility towards others, a community or an institution, and influences decisions or enables individuals to have access to the decision-making processes (Breton, 1997)

The concept of social inclusion was introduced in India by primarily focusing on inequalities and exploitation based on the membership of particular social groups and is seen in terms of exclusionary processes based on caste, gender, tribe and religious identities (Eshwer kale, 2011).

IWMP is being implemented all over the country. In Nagaland IWMP has been launched during 2009-2010 and implemented successfully by the Department of Land Resources in all the 11 districts of the state. IWMP emphasizes on the participatory approach of the beneficiaries in planning, implementing, monitoring and post- withdrawal activities. This paper is an attempt to assess the performance of IWMP in respect of improvement of social inclusion among the beneficiaries as well as degree of performance of IWMP to ensure the equal distribution of equity of benefits among the beneficiaries.

METHODOLOGY

To complete the present study, Wokha district of Nagaland, India was purposively selected. The first batch of the project under Wokha district consisted of IWMP-I and IWMP-II. These projects were implemented since 2009 and completed in the year 2014. IWMP-I and IWMP-II were purposively selected for the study as the other projects are still ongoing. For the study, selection of villages from the completed batch was done in consultation with the watershed development teams (WDT) of the project area. Twelve villages were selected from IWMP-I and IWMP-II and a total of 114 beneficiaries were included as respondents and interviewed.

To evaluate the extent of social inclusion of the beneficiaries under the project, a before and after study were adopted. The difference in pre and post IWMP was attributed as benefit from the project intervention. Important 5 aspects of social inclusion, viz., social, physical, economic, gender and political aspects and 35 issues were included in the study. An interview schedule

consisting of a list of 35 issues/statements (8 under social, 10 each under physical and economic, 5 under gender and 2 under political aspects) was prepared with a three point continuum of agreement viz., not agree, partially agree and fully agree. A score of 1, 2 and 3 was assigned for not agree, partially agree and fully agree respectively in case of positive statements and a reverse scoring for negative statements.

Data were collected from beneficiaries with the help of interview schedule through personal interview. The scores obtained from each beneficiary in respect of before and after the IWMP were summed up separately and designated as the mean score of before and after the implementation of IWMP. The difference in mean score between before and after the implementation of IWMP was calculated. Ranking was done on different issues under each aspect of social inclusion based on the highest to lowest value of mean score of difference obtained against each issue/statement. The beneficiaries were also categorized into three strata as least benefitted, moderately benefitted and greatly benefitted by following the mean \pm standard deviation formula. Further, Z-test was used to assess the level of significance of improvement of social inclusiveness due to IWMP.

RESULTS AND DISCUSSION

To examine the social inclusiveness 5 important aspects, viz., social, physical, economic, gender and political aspects are included in the study, accordingly. Under social aspect 8 issues are included to explore the performance of IWMP scheme in respect of social inclusion. Up-scaling of 'Leadership role' of the beneficiaries is included as an issue (Table 1) and positively enhanced after the project intervention with an increased mean difference of 0.60 and is ranked as first. The Z value is -7.98 with p value 0.0001 and critical Z value 1.96. It can be concluded that the difference is highly significant. This is followed by 'involvement in decision making' with a mean value of 0.34. The Z score is -4.58 and the difference is statistically significant. The mean difference (0.25) in respect of 'Participation in ceremonial and social events' after the implementation of the scheme is ranked third, with Z value of -3.63 which differs significantly. The mean difference in respect of 'timely information on social, economic and political issues being communicated to the family' as

Table 1. Performance of IWMP in respect of Social aspect of all round social inclusion (N=114)

Statement Social aspects	Mean		Rank	Z- test	Z-critical (two tailed)	p- value	
	Before	After					Difference
Getting regular job in the local market is very hard to come by	1.20	1.36	0.16	V	-2.38	1.96	0.0172
There exist a harmonious social relationship within our community	2.80	2.73	0.07	VII	1.176NS	1.96	0.2395
I have no leadership role in any organization around my locality	2.09	2.68	0.60	I	-7.98**	1.96	0.000001
I never take part in any decision making process in developing my locality	2.54	2.89	0.34	II	-4.58**	1.96	0.00004
There is a positive change in emotional support during both good and bad times	2.61	2.68	0.08	VI	-1.20NS	1.96	0.2306
I always participate in ceremonial and social events	2.24	2.48	0.25	III	-3.63**	1.96	0.0003
Timely information on social, economic and political issues is communicated to my family	2.47	2.70	0.23	IV	-3.23**	1.96	0.0012
My family do not face any kind of social injustice	2.47	2.63	0.16	V	-2.07*	1.96	0.0384

compared to before the implementation of IWMP is 0.23 and ranked fourth. The Z score is -3.23 and p value is 0.0012, the difference is statistically significant. Issue of 'getting regular job in the local market' as well as issue of 'social injustice' being meted out to the beneficiary family showed a positive improvement after the project and each ranked at fifth with mean difference of 0.16 (Z values -2.38 and -2.07 with p values of 0.0172 and 0.0384, respectively). In respect of 'positive change among beneficiaries in emotional support during both good and bad times from fellow community members', the difference in mean value between before and after the implementation of scheme is 0.08 and it is ranked sixth, the Z-value is -1.20 and does not differ significantly. It can be seen from the Table 1, that there is no significant difference concerning the existence of harmonious social relationship within the community before and after the project, and is ranked seventh with a mean difference of 0.07.

It is observed (Table 2) that the difference in 'access to near and far market' as compared to before the implementation of scheme has increased with a mean difference of 0.62 and is ranked first among the physical issues/statements. The Z- scores in respect of 'access to near and far market' are -7.90 and p value is 0.0002, the difference is statistically significant. The mean difference in respect of 'Access to adequate clean water' between before and after the implementation of

the IWMP is ranked second with mean difference of 0.58 and the difference is highly significant with Z-value of -7.27 and p value of 0.0003. The mean difference in respect of 'availability of proper market to sell farm products' is reached up to 0.46 and ranked third and the difference is highly significant (Z scores is -5.62 and p value is 0.0001).

'Access to proper sanitation' is ranked fourth with a mean difference (before and after the implementation of the scheme) of 0.41 and difference is highly significant with Z score of -6.00 and 0.0001 p value. The Table 2 also shows a positive improvement with respect to 'sufficient living space for the family members' with a mean difference of 0.36 and is statistically significant (Z-value of 3.46 and 0.005 p value) and is ranked fifth. The mean difference in respect of 'Affordability of children education' is ranked sixth with statistically significant mean difference of 0.27 (Z value of -2.90 and p value of 0.0038). This is followed by 'improvement in working condition' being ranked seventh with a significant mean difference of 0.26 (Z-value of -3.70 and p value of 0.0002). The 'housing conditions' also improved with a significant mean difference of 0.24 (Z-value of -2.38 and p value of 0.017) and is ranked eight. 'Immunizing the children for better family health' is ranked ninth with a non-significant mean difference of 0.12 (Z-value = -1.45 and p value=0.14) only. Access of electricity under physical aspect has

Table 2. Performance of IWMP in respect of physical, economical, gender and political aspect of social inclusion (N=114)

Statement	Mean		Difference	Rank	Z-test	Z-critical (two tailed)	p-value
	Before	After					
<i>Physical</i>							
Housing conditions were/are poor	2.15	2.39	0.24	VIII	-2.38*	1.96	0.0173
Have sufficient living space for the family	2.15	2.51	0.36	V	-3.46**	1.96	0.0005
Access to proper sanitation	2.25	2.66	0.41	IV	-6.00**	1.96	0.00001
Access to electricity in my house	2.99	3	0.01	X	Ns		
Can afford proper education of my children	2.18	2.46	0.27	VI	-2.90**	1.96	0.0038
Access adequate clean water for my family	2.18	2.75	0.58	II	-7.27**	1.96	0.00003
Immunizing the children for better family health	2.56	2.68	0.12	IX	-1.45	1.96	0.1477
Access to near and far markets have increased	2.08	2.70	0.62	I	-7.90**	1.96	0.00002
There is no proper market to sell farm products	1.31	1.76	0.46	III	-5.62**	1.96	0.0001
Working condition is decent	2.38	2.64	0.26	VII	-3.70	1.96	0.0002
<i>Economical</i>							
I can afford to spend for improving my house	1.56	1.98	0.42	V	-4.73**	1.96	0.0002
I can afford to pay the electric bills on time	2.21	2.54	0.32	VII	-3.86**	1.96	0.0001
Purchasing power of my family has improved	1.73	2.25	0.53	II	-6.67**	1.96	0.0002
I can afford to provide nutritious food for family	2	2.43	0.43	IV	-5.92**	1.96	0.00003
Access to effective health care facility of my family	1.78	2.05	0.27	VIII	-3.23**	1.96	0.0012
I cannot afford to pay emergency doctors	1.83	2.09	0.25	IX	-3.17**	1.96	0.0015
Getting access to credit facility is a problem	1.67	2.35	0.68	I	-7.36**	1.96	0.0001
Introduction of so many govt. schemes	1.75	2.25	0.50	III	-5.65**	1.96	0.0001
has improved the employment rate of my family							
I consider myself secured with my earnings	1.77	2.10	0.32	VII	-3.89**	1.96	0.0001
I am happy with my income and lifestyle	1.89	2.25	0.36	VI	-4.16**	1.96	0.00003
<i>Physical</i>							
Mobility of female members in the family is not restricted	2.67	2.96	0.29	IV	-5.49**	1.96	0.00003
Female employment rate in our vicinity is increasing	2.41	2.85	0.43	III	-6.72**	1.96	0.00001
Disparity in wage payment still exist across gender	1.96	2.290	0.28	V	-3.32**	1.96	0.0009
Participation of women in developmental activities is increasing	1.83	2.39	0.56	I	-6.75**	1.96	0.00001
Women can equally participate in decision making process in developmental activities	1.23	1.76	0.54	II	-8.53**	1.96	0
<i>Political</i>							
I have taken part in all the voting processes during the last three elections	2.86	2.95	0.09	I	-1.55NS	1.96	0.1219
My family deprived of political participation	2.72	2.77	0.05	II	-0.78 NS	1.96	0.4370
<i>All aspects under social inclusion</i>							
Social, Physical, Economic, Gender and Political	77.508	86.605	9.096	-	-9.0157**	1.96	0.001

not produced any considerable change. It is important to highlight that in the study area, immunization programme for better family health' and electrification have started before the introduction of IWMP.

Therefore, IWMP has no influence in these respects. From the study it can be concluded that the IWMP has immense influence in up-scaling the physical aspect of social inclusion (Table 2).

From the economic aspect of inclusion, it is observed that (Table 2) there is great improvement in 'accessing credit facility' after the project implementation with a mean difference of 0.68 and is ranked first. The mean difference is highly significant with Z-value of -7.36 and p-value of 0.0001. Improvement in the 'purchasing power' of the beneficiaries after the introduction of IWMP is ranked second with a score of 0.53 and difference is highly significant (Z-value of -6.67 and p-value of 0.0002). This is followed by improvement in the 'employment rate of the family' with a highly significant mean difference of 0.50 and is ranked third (Z-value of -5.65 and p-value of 0.0001). 'Ability to provide nutritious food for the family' ranked fourth and scored a mean difference of 0.43. The mean difference is highly significant with Z-value of -5.92 and p-value of 0.0003. The fifth rank with a highly significant mean difference of 0.42 is occupied by the beneficiary's 'affordability to spend for improving the housing conditions' with a Z-value of -4.73 and p value of 0.0002. 'Contentment of the beneficiary with his income and lifestyle' is ranked sixth and scored a highly significant (Z-value of -4.16 and p-value of 0.0003) mean difference of 0.36. 'Affordability to pay the electric bills on time' as well as the 'feeling of being secured with the earnings' scored a highly significant (Z-value of -3.86 and -3.89 respectively with p-value of 0.0001) mean difference of 0.32 each and are ranked seventh. 'Access to effective health care facility of the beneficiaries' also scored a significant mean difference of 0.27 (Z-value -3.23 at p-value of 0.0012) and is ranked eight. With a significant mean difference of 0.25 (Z-value of -3.17 at p value of 0.0001), the ability of the beneficiaries to pay specialist doctors in times of emergency occupied the ninth rank. Therefore, it can be concluded that the economic aspect of social inclusion shows highly significant improvement after the IWMP implementation.

In case of gender aspects, it is evident from Table 2 that there is an increased 'participation of women in developmental activities' since the implementation of the project with a highly significant mean difference of 0.56 with Z-value of -6.75 and p-value of 0.0001, and is ranked first. Also, 'participation of women in decision making' secured the second rank with a highly significant mean difference of 0.54 (Z-value of -8.53 and p value of 0.0). 'Increase in female employment rate in the

vicinity' is ranked third with a highly significant mean difference of 0.43 (Z-value of -6.72 and p-value of 0.0001). Regarding issue of 'female mobility', there is significant improvement with a mean difference of 0.29 and is ranked fourth (Z-value of -5.49 and p-value of 0.0003). Issue of 'disparity in wage payment across gender' obtained the fifth rank with a significant mean difference of 0.28 (Z-value of -3.32 and p-value of 0.0009). Therefore, based on the findings (Table 4) it can be concluded that gender aspect of social inclusion shows highly significant improvement after the implementation of IWMP.

The Table 2 also indicates political aspect of social inclusion. Participation in all the voting processes during the last three elections is ranked first with a mean difference of 0.09 but does not yield any significant difference. 'Political participation' of the family does not show any significant mean difference i.e., 0.05 and ranked second. Therefore, people are actively participating in electoral process of democracy. The non-significant result so obtained for both the statements are indicating that implementation of IWMP has no influence to accelerate the political inclusion.

It is clear from the findings (Table 2) that the overall mean difference in respect of social inclusion is 9.096 and this difference is statistically significant with Z value of -9.0157, Z-critical of 1.96 and p-value of 0.001. Therefore, it can be concluded that performance of IWMP in improving the social inclusion is highly significant.

The scores obtained by individual beneficiaries were summed up separately and the difference in score before and after the project has been calculated. The final score so obtained is categorized following the mean \pm standard deviation formula.

Table 3. Distribution of the beneficiaries based on the difference in the scores obtained before and after the implementation of the project (N=114)

Categories of beneficiaries	No.	%
Least benefitted (up to 6.13)	16	14
Moderately benefitted(6.14 to 16.65)	72	63
Greatly benefitted (Above 16.66)	26	23

Table 3 shows that majority of the beneficiaries i.e., 63 per cent have moderately benefitted in terms of social inclusion from the implementation of IWMP. On the other hand a considerable number of beneficiaries

(23 %) are greatly benefitted due to the implementation of IWMP. However, only 14 per cent of them fall under least benefitted category.

CONCLUSION

Social inclusion is a global issue and a challenging task for Asian and African countries. In Indian context, it can be traced within the Gandhian (M. G. Gandhi) movement during 1930s. Immediately after independence, emphasis on social upliftment, poverty alleviation, socialization of common people and democratic decentralization has been included in development scenario of the country. Later on, sector specific issues and need based various development initiatives have been introduced in the country to address the social ill practices and upliftment of the community. Similarly, IWMP is an initiative for all round development, poverty alleviation and upliftment of rural community i.e., to abolish social exclusion and emphasis on social inclusion.

This paper examines the performance of IWMP in respect of promotion of social inclusion in the beneficiaries and communities of Nagaland. Study

proves that the beneficiaries have achieved significant improvement in social, physical, economic and gender aspects of social inclusion (Z value of -9.0157, Z-critical of 1.96 and p value of 0.001) after the implementation of the project and that the IWMP has addressed the equity issues quite effectively. The programme has ensured a positive effect in creating a socially inclusive society for the beneficiaries. Also, majority of the beneficiaries i.e., 63 % had moderately benefitted in terms of social inclusion from the implementation of IWMP. On the other hand a considerable number of beneficiaries (23%) are greatly benefitted from IWMP.

Therefore, efforts should be put to ensure much greater benefits for the remaining beneficiaries. Redesigning of policies and strategies is prerequisite to ensure equitable distribution of benefits and increase availability of resources of watershed projects to the entire community. The process of social inclusion needs to take place simultaneously at multiple levels, from the individual, community and local levels, to the regional and national levels, as social inclusion is an issue which concerns all stakeholders in society (UNDESA, 2009).

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