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Research Paper

Impact of Technological Diffusion for Sustainablae Development In The Scheduled Areas In Telangana

Dr Ravikumar Sandra
Department of Economics
Osmania University, Hyderabad.

Abstract:
The impact of technological diffusion on the respondents sustainable livelihoods in scheduled areas and arranged them in the descending order of endorsement (strongly agree) included Increase in income due to the growth of off farm activities, Assured sources of livelihood from the forests within the reach of time and resources, Every likelihood of sustainability of forests over period, Eco friendly consumption pattern is evident, Wide scope for phenomenal growth of the business of forest produce, Increase in employment , Forests became legalized sources of livelihoods, Afforestation programs provided both employment and health, Forest development through people's participation, Improvement in the accessibility to the use of forest resources, Cattle development due to adequate availability of animal fodder, Decline in poverty, Availability of healthy food at effective price rates, Pollution hazards is minimum, and minor forest produce (MFP) became a sustainable source of income. Technology will be based on the needs of the specific social, environmental and climatological conditions of local communities and flexible in response to changes in the socio-economic and environmental conditions, Technology will be empowering to communities especially so for the vulnerable groups within the community.

Keywords: *technological diffusion, sustainable livelihoods, Afforestation, employmentand health, poverty*

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I. Introduction:

Many tribal communities in India suffer from severe discrimination and destitution, despite living in areas rich in natural resources. The modernization of the Indian society and industries has resulted in the exploitation of these resources, such as forests, relegating the local communities to the margins. At the same time, such modernization has become an important source of revenue for the states. Large forests have been designated as “reserved” and put under the control of the state department, for the regulated extraction of timber and other produce. Consequently, tribal communities have been denied access to these resources, leading to conflicts between the community and the state’s claim to the entire forest wealth. It is crucial for governments to formulate effective strategies to address these conflicts through developmental activities. To improve collaborative effort between the state and local communities, the latter must be increasingly integrated into modern society. Traditional and/or existing techniques in forestry including planting, regeneration, thinning and harvesting are fundamental for implementation of mitigation options such as afforestation, reforestation, and forest management. Further, improvement of such sustainable techniques is required and transfer could build capacity in developing countries. Biotechnology may have an important role especially for afforestation and reforestation. As the area of planted forests including plantations of fast-growing species for carbon sequestration increases, sustainable forestry practices will become more important for both productivity and environment conservation.

Technology deployment, diffusion and transfer in the forestry sector provide a significant opportunity to help mitigate climate change and adapt to potential changes in the climate. Apart from reducing GHG emissions or enhancing the carbon sinks, technology transfer strategies in the forest sector have the potential to provide tangible socio-economic and local and global environmental benefits, contributing to sustainable development (IPCC, 2000b). Especially, technologies for improving productivity, sustainable forest management, monitoring, and verification are required in developing countries. However, existing financial and

institutional mechanism, information and technical capacity are inadequate. Thus, new policies, measures and institutions are required to promote technology transfer in the forest sector.

Objective of the Study:

The analysis of the impact of technological diffusion for sustainable development of respondents in the scheduled areas includingITDA Bhadrachalam and ITDA Utnoor.

Methodology: For the purpose of present study, 368 samples are selected from the scheduled areas including ITDA Bhadrachalam and ITDA Utnoor. The distribution of samples between ITDA Bhadrachalam and ITDA Utnoor is 57.1 percent and 42.9 percent respectively.The sample respondents are selected mostly by adhering to the principle of stratified random sampling, and the criterion for stratification of sample respondents is economic status. The primary data are collected directly from the respondents by administering a pre designed questionnaire/schedule. Simple percentages, graphs, frequency distribution, 5-point Likert scale have been employed in order to study the objective of the study.

II. Results and Analysis:

Table-1

Impact of technological diffusion- Forests became legalized sources of livelihoods

	Frequency	Percent	Cumulative Percent
Strongly Disagree	25	6.8	6.8
Disagree	43	11.7	18.5
Neither agree or Disagree	73	19.8	38.3
Agree	158	42.9	81.3
Strongly Agree	69	18.8	100.0
Total	368	100.0	

Source:Field study

Table-1 deals with the impact of technological diffusion on the respondents namely forests became legalized sources of livelihoods and found that it is agreed by 42.9 percent, just Neither agree or Disagree by 19.8 percent and Strongly Disagree by 6.8 percent of the respondents.

Table-2

Impact of technological diffusion- Forest development through people's participation

	Frequency	Percent	Cumulative Percent
Strongly Disagree	31	8.4	8.4
Disagree	34	9.2	17.7
Neither agree or Disagree	63	17.1	34.8
Agree	132	35.9	70.7
Strongly Agree	108	29.3	100.0
Total	368	100.0	

Source: Field study

Table-2 deals with the impact of technological diffusion on the respondents namely 'forest development through people's participation' and found that it is agreed by 35.9 percent, just Strongly Agree by 29.3 percent and Strongly Disagree by 8.4 percent of the respondents.

Table-.3
Impact of technological diffusion- Every likelihood of sustainability of forests over period

	Frequency	Percent	Cumulative Percent
Strongly Disagree	26	7.1	7.1
Disagree	42	11.4	18.5
Neither agree or Disagree	89	24.2	42.7
Agree	154	41.8	84.5
Strongly Agree	57	15.5	100.0
Total	368	100.0	

Source: Field study

Table-3 deals with the impact of technological diffusion on the respondents namely 'every likelihood of sustainability of forests over period' and found that it is agreed by 41.8 percent, just Neither agree or Disagree by 24.2 percent and Strongly Disagree by 7.1 percent of the respondents.

Table-4
Impact of technological diffusion- Wide scope for phenomenal growth of the business of forest produce

	Frequency	Percent	Cumulative Percent
Strongly Disagree	16	4.3	4.3
Disagree	37	10.1	14.4
Neither agree or Disagree	106	28.8	43.2
Agree	123	33.4	76.6
Strongly Agree	86	23.4	100.0
Total	368	100.0	

Source: Field study

Table-4 deals with the impact of technological diffusion on the respondents namely 'wide scope for phenomenal growth of the business of forest produce' and found that it is agreed by 33.4 percent, just Neither agree or Disagree by 28.8 percent and Strongly Disagree by 4.3 percent of the respondents.

Table-5
Impact of technological diffusion- Decline in poverty

	Frequency	Percent	Cumulative Percent
Strongly Disagree	14	3.8	3.8
Disagree	52	14.1	17.9
Neither agree or Disagree	81	22.0	39.9
Agree	159	43.2	83.2
Strongly Agree	62	16.8	100.0
Total	368	100.0	

Source: Field study

Table-5 deals with the impact of technological diffusion on the respondents namely 'decline in poverty' and found that it is agreed by 43.2 percent, just Neither agree or Disagree by 22.0 percent and Strongly Disagree by 3.8 percent of the respondents.

Table-6
Impact of technological diffusion- Increase in employment

	Frequency	Percent	Cumulative Percent
Strongly Disagree	14	3.8	3.8
Disagree	38	10.3	14.1
Neither agree or Disagree	72	19.6	33.7

Agree	155	42.1	75.8
Strongly Agree	89	24.2	100.0
Total	368	100.0	

Source: Field study

Table-6 deals with the impact of technological diffusion on the respondents namely 'increase in employment' and found that it is agreed by 42.1 percent, just Strongly Agree by 24.2 percent and Strongly Disagree by 3.8 percent of the respondents.

Table-7
Impact of technological diffusion- Improvement in the accessibility to the use of forest resources

	Frequency	Percent	Cumulative Percent
Strongly Disagree	14	3.8	3.8
Disagree	39	10.6	14.4
Neither agree or Disagree	124	33.7	48.1
Agree	118	32.1	80.2
Strongly Agree	73	19.8	100.0
Total	368	100.0	

Source: Field study

Table-7 deals with the impact of technological diffusion on the respondents namely 'improvement in the accessibility to the use of forest resources' and found that it is Neither agree or Disagree by 33.7 percent, just agreed by 32.1 percent and Strongly Disagree by 3.8 percent of the respondents.

Table-8
Impact of technological diffusion- Assured sources of livelihood from the forests within the reach of time and resources

	Frequency	Percent	Cumulative Percent
Strongly Disagree	22	6.0	6.0
Disagree	49	13.3	19.3
Neither agree or Disagree	120	32.6	51.9
Agree	112	30.4	82.3
Strongly Agree	65	17.7	100.0
Total	368	100.0	

Source: Field study

Table-8 deals with the impact of technological diffusion on the respondents namely 'assured sources of livelihood from the forests within the reach of time and resources' and found that it is agreed by 30.4 percent, just Neither agree or Disagree by 32.6 percent and Strongly Disagree by 6 percent of the respondents.

Table-9
Impact of technological diffusion- MFP became a sustainable source of income

	Frequency	Percent	Cumulative Percent
Strongly Disagree	2	.5	.5
Disagree	29	7.9	8.4
Neither agree or Disagree	77	20.9	29.3
Agree	166	45.1	74.5
Strongly Agree	94	25.5	100.0
Total	368	100.0	

Source: Field study

Table-9 deals with the impact of technological diffusion on the respondents namely 'minor forest produce (MFP) became a sustainable source of income' and found that it is agreed by 45.1 percent, just Neither agree or Disagree by 20.9 percent and Strongly Disagree by .5 percent of the respondents.

Table-10
Impact of technological diffusion- Availability of healthy food at effective price rates

	Frequency	Percent	Cumulative Percent
Strongly Disagree	25	6.8	6.8
Disagree	48	13.0	19.8
Neither agree or Disagree	100	27.2	47.0
Agree	138	37.5	84.5
Strongly Agree	57	15.5	100.0
Total	368	100.0	

Source: Field study

Table-10 deals with the impact of technological diffusion on the respondents namely 'availability of healthy food at effective price rates' and found that it is agreed by 37.5 percent, just Neither agree or Disagree by 27.2 percent and Strongly Disagree by 6.8 percent of the respondents.

Table-11
Impact of technological diffusion- Afforestation programs provided both employment and health

	Frequency	Percent	Cumulative Percent
Strongly Disagree	17	4.6	4.6
Disagree	36	9.8	14.4
Neither agree or Disagree	84	22.8	37.2
Agree	157	42.7	79.9
Strongly Agree	74	20.1	100.0
Total	368	100.0	

Source: Field study

Table-11 deals with the impact of technological diffusion on the respondents namely 'Afforestation programs provided both employment and health' and found that it is agreed by 42.7 percent, just Neither agree or Disagree by 22.8 percent and Strongly disagreed by 4.6 percent of the respondents.

Table-12
Impact of technological diffusion- Eco friendly consumption pattern is evident

	Frequency	Percent	Cumulative Percent
Strongly Disagree	27	7.3	7.3
Disagree	41	11.1	18.5
Neither agree or Disagree	90	24.5	42.9
Agree	149	40.5	83.4
Strongly Agree	61	16.6	100.0
Total	368	100.0	

Source: Field study

Table-12 deals with the impact of technological diffusion on the respondents namely 'ecofriendly consumption pattern is evident' and found that it is agreed by 40.5 percent, just Neither agree or Disagree by 24.5 percent and Strongly Disagree by 7.3percent of the respondents.

Table-13
Impact of technological diffusion- Increase in income due to the growth of off farm activities

	Frequency	Percent	Cumulative Percent
Strongly Disagree	27	7.3	7.3
Disagree	44	12.0	19.3
Neither agree or Disagree	93	25.3	44.6
Agree	125	34.0	78.5
Strongly Agree	79	21.5	100.0
Total	368	100.0	

Source: Field study

Table-13 deals with the impact of technological diffusion on the respondents namely 'increase in income due to the growth of off farm activities' and found that it is agreed by 34.4 percent, just Neither agree or Disagree by 25.3 percent and Strongly Disagree by 7.3 percent of the respondents.

III. Conclusion:

It is concluded that the impact of technological diffusion on the respondents sustainable livelihoods in scheduled areas are measured on a 5-pont Likert scale and arranged them in the descending order of endorsement (strongly agree) included Increase in income due to the growth of off farm activities, Assured sources of livelihood from the forests within the reach of time and resources, Every likelihood of sustainability of forests over period, Eco friendly consumption pattern is evident, Wide scope for phenomenal growth of the business of forest produce, Increase in employment , Forests became legalized sources of livelihoods, Afforestation programs provided both employment and health, Forest development through people's participation, Improvement in the accessibility to the use of forest resources, Cattle development due to adequate availability of animal fodder, Decline in poverty, Availability of healthy food at effective price rates, Pollution hazards is minimum, and MFP became a sustainable source of income. Technology will be based on the needs of the specific social, environmental and climatological conditions of local communities and flexible in response to changes in the socio-economic and environmental conditions, Technology will be empowering to communities especially so for the vulnerable groups within the community.

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