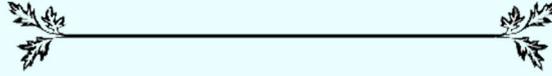




Ecosystem Services Improvement Project



Sustainable Land and Ecosystem Management: Communication Strategy



**Indian Council of Forestry
Research and Education**
(Autonomous body of Ministry of Environment,
Forest and Climate Change, Government of India)
P.O. New Forest, Dehradun – 248006

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Indian Council of Forestry Research and Education
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P.O. New Forest, Dehradun – 248006

ICFRE, 2020

Prepared by:

ESIP-Project Implementation Unit
Biodiversity and Climate Change Division
Indian Council of Forestry Research and Education
P.O. New Forest, Dehradun – 248 006 (INDIA)

Direction & Guidance by:

Sh. Anurag Bhardwaj, Director (International Cooperation) & Project Director, ESIP

Contributors:

Dr. R.S. Rawat, Scientist In-charge, BCC Div. and Project Manager, ESIP
Dr. Nivedita Mishra Thapliyal, Social Development and Community Mobilization Consultant
Dr. Shilpa Gautam, Scientist -E, BCC Div. and Project Coordinator, ESIP
Dr. Deepti Verma, Policy-cum-Knowledge Management Consultant
Dr. Sunil Prasad, Monitoring and Evaluation Consultant
Sh. Satish Tiwari, State Coordinating Consultant
Sh. NPS Nain, Land Management Consultant
Dr. Sanjay Singh, Scientist-D, BCC Div. and Technical Manager, ESIP
Sh. R. Bisen, Natural Resource Management cum Biodiversity Consultant

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Abbreviations Used

BCC	Biodiversity and Climate Change
CBD	Convention on Biological Diversity
CG	Chhattisgarh
ESIP	Ecosystem Services Improvement Project
eNAM	National Agriculture Market
GPs	Gram Panchayats
ICFRE	Indian Council of Forestry Research and Education
INR	Indian National Rupee
ha	Hectare
JFMCs	Joint Forest Management Committees
MP	Madhya Pradesh
PIU	Project Implementation Unit
SDG	Sustainable Development Goal
SLEM	Sustainable Land and Ecosystem Management
SLM	Sustainable Land Management
SMS	Short Message Service
SWOT	Strengths, Weaknesses, Opportunities and Threats
TV	Television
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

Communication strategy is an integral part of the planning process for successful achievement of the key deliverables and is assumed to be capable of making required changes and multiplying the impacts of any programme/ project/ scheme. It has been observed that the messages do not always reach up to the intended beneficiaries in a way they are desired to. In such cases proper designing of communication strategy helps to reach out to the intended project beneficiaries with application of proper approaches and methods of communication. A communication strategy comprises methods, messages and approaches which are directed towards achieving the objectives of any programme/ project/ scheme for benefitting the target beneficiaries. The effective communication strategy also needs a constant flow of information for achieving meaningful participation of the project beneficiaries and other stakeholders.

Ecosystem Services Improvement Project (ESIP) supports the goals of Green India Mission by demonstrating models for adaptation-based mitigation through sustainable land and ecosystem management and provides livelihood benefits. The objective of the project is to improve forest quality, land management and benefits accruing out of non-timber forest produce for forest dependent communities in selected landscapes of Chhattisgarh and Madhya Pradesh. One of the main components of the project is scaling up sustainable land management (SLEM) in selected landscapes. Beneficiaries of scaling up of SLEM practices under the ESIP include 5000 land users adopting the SLEM practices, 25,000 direct beneficiaries comprising forest dwellers, small landholders, marginal farmers, and landless livestock holders at the community level in the states of Madhya Pradesh and Chhattisgarh. The indirect beneficiaries include a larger population in these states which will benefit from improved forest quality and ecosystem services such as improved water flow, climate amelioration and land productivity.

For achieving the targets pertaining to scaling up of SLEM practices, constant flow of information, communication and education are required. This depends upon implementation of an effective communication strategy for scaling up of the SLEM practices for improving ecosystem services and for addressing the issue of poverty alleviation through promoting enhanced efficiency of natural resource use, sustainable productivity, and

reduced vulnerability to extreme weather events. Communication strategy helped in involving local communities, developing a sense of belongingness, behavioural change, resource planning and mobilization, participatory monitoring and evaluation for scaling up of SLEM practices.

The objective of the SLEM communication strategy is to facilitate knowledge and experience sharing, dissemination of knowledge on best practices and success stories for scaling up of SLEM in the ESIP areas of Chhattisgarh and Madhya Pradesh. The strategy is targeting *Gram Panchayats*, Joint Forest Management Committees, Biodiversity Management Committees, Self Help Groups, forest dwellers, small landholders, marginal farmers and landless livestock holders as a primary target group; state forest departments and other line departments of the Madhya Pradesh and Chhattisgarh State Governments as a secondary target group, and *Krishi Vigyan Kendras*, *Van Vigyan Kendras*, community based organisations and non-governmental organisations as a special target group. Communication modes viz. demonstrations, wall paintings, posters, hoardings; capacity building programmes and workshops; preparation and printing of pamphlets, flyers, brochures and success stories etc.; media outreach, folk media, use of audio-visuals, door-to-door contact campaigns have been suggested to communicate the SLEM messages to the target beneficiaries and other stakeholders of the ESIP areas of Chhattisgarh and Madhya Pradesh states for scaling up of SLEM practices. It is also suggested to use some effective communication tools such as interpersonal or face-to-face interaction, group meetings or discussion, print media, mass media and folk media for transmitting the messages for scaling up SLEM practices. Necessary action plans and indicative budget required for implementation of the SLEM communication strategy under ESIP have also been proposed.





1. Introduction

About 100 million of India's population is directly depend on forested landscape for their livelihoods. Livelihood of the forest dependent communities is adversely affecting to a large extent due to forest degradation. Moreover, forest degradation directly contributes to climate change resulting in vegetation loss thereby imposing significant challenges to the local communities of the forest fringe villages in respect of their livelihoods. Decreasing forest cover, increasing habitat fragmentation and diminishing forest quality is posing greater challenges to life of forest dependent communities and adverse impacts will keep on increasing unless significant efforts are made to improve the sustainable flow of ecosystem goods and services (MoEFCC, 2016).

Land is a finite resource and with intense demand for land-based resources, and management becomes a complex challenge. Land degradation is a result of varying degree and types caused by unsustainable use of land-based resources, deforestation, over grazing and other anthropogenic pressures. The rapid pace of land degradation and desertification has reached alarming proportions and are capable of posing significant challenges in maintaining land-based sustainable productivity on the one hand and economic growth on the other (ICFRE, 2014). Higher agriculture productivity from small land parcels on the rain fed areas demands adequate fund flow, planning and institutional arrangements for scaling up of sustainable land management practices.

Since beginning, agricultural sector occupies a center stage in Indian economy with the inherent potential to promote inclusive growth, enhance rural income and sustain food and nutritional security (ICFRE, 2014). In India, about 72 percent of the population lives in rural areas with agriculture being the main source of livelihood and 85 percent of the farmers belong to small and marginal category (Singh, 2019). India with only 2.3 percent of the world's land and less than 4 percent of the global fresh water feeds about 18 percent of the world's population. Moreover, climate change has challenged the goal to achieve SDG of zero hunger by 2030. There are significant opportunities for improving sustainable land and ecosystem management practices in order to improve land productivity and reduce land degradation. Hence, sustainable land and ecosystem management practices need to be adopted and scaled up to

improve the health and productivity of land on a sustainable basis.

For adopting sustainable land and ecosystem management practices, a well thought-out communication strategy along with an action plan is required to be developed. As perceptions, needs and conditions are diverse within a community along with demographic profile and geographical remoteness, SLEM communication strategy need to be designed with proper analysis and planning. Communication strategy designed with a people-centric approach and a need-based analysis in order to act as a catalyst to achieve success in the implementation of any programme/ project/ scheme related to sustainable land and ecosystem management.

Overview of Ecosystem Services Improvement Project: The World Bank is supporting the Global Environment Facility (GEF) Grant project titled Ecosystem Services Improvement Project (ESIP) which supports the goals of Green India Mission by demonstrating models for adaptation-based mitigation through sustainable land and ecosystem management and livelihood benefits. The objective of the project is to improve forest quality, land management and non-timber forest produce benefits for forest dependent communities in selected landscapes of Chhattisgarh and Madhya Pradesh. The project has following four components:

1. Strengthen capacity of government institutions in forestry and land management programs in Chhattisgarh and Madhya Pradesh
2. Investments for improving forest quality in selected landscapes
3. Scaling up sustainable land and ecosystem management in selected landscapes
4. Project management

Indian Council of Forestry Research and Education is implementing component 3 of ESIP, *i.e.*, scaling up the SLEM best practices, which are socially and culturally acceptable to people, are low cost and proven to be ecologically and economically beneficial. The main objectives of this component are to prevent land degradation and desertification, and increase carbon stock through a combination of investments to implement and scale up tried-and-tested SLEM best practices, to increase national capacity for monitoring land degradation and track associated indicators, and to promote exchange of knowledge on SLEM approaches. The goal is to benefit small and marginal farmers and other rural poor and to develop a national knowledge platform for supporting a community for practice of SLEM. These activities are designed to overcome the twin challenges of arresting land degradation and meeting food security targets. This component finances on-the-ground sustainable land management investments in private land holdings and common property lands and enhance knowledge and capacity for further scaling up of SLEM approaches at the national level. Beneficiaries of the scaling up of SLEM practices under ESIP include 5000 land users adopting the SLEM practices and 25,000 direct beneficiaries comprising of forest dwellers, small landholders, marginal farmers, and landless livestock holders at the community level in the states of Madhya Pradesh and Chhattisgarh. The indirect beneficiaries include larger population in these states which will benefit from improved forest quality and ecosystem services such as improved water flows, climate amelioration and land productivity.

Sustainable land and ecosystem management: Land provides vital resources to the society such as food, fuel, fibers and many other ecosystem goods and services that support production functions, regulate risks of natural hazards, or provide cultural and spiritual services (Sanz *et al.*, 2017). As per the UN Earth Summit of 1992, sustainable land management (SLEM) is “*the*

use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and maintenance of their environmental functions". Sanz *et al.*, 2017 highlighted that the objective of SLEM is to harmonize the complimentary goals of providing environmental, economic, and social opportunities for the benefit of present and future generations while maintaining and enhancing the quality of natural resources. Presently, SLEM focus on a holistic approach for achieving long-term productive ecosystems by integrating biophysical, socio-cultural and economic needs and values (Holling, 2001 and Schwilch *et al.*, 2009). Along with rehabilitation and restoration, SLEM practices forms one of the main mechanisms to achieve land degradation neutrality (Orr *et al.*, 2017). SLEM practices can also be seen as a vehicle to optimize the contributions of land use-based actions in line with the objectives of the UNFCCC, UNCCD and CBD, and broadly contribute in achieving the land-based targets of sustainable development goals.

SLEM practices aiming to maintain or increase forest cover through afforestation, reforestation, and sustainable management of forest have a significant potential for climate change mitigation and adaptation while preventing land degradation and increasing the resilience of forest-dependent communities. The practices and lesson learnt through various case studies, adaption mechanisms of the problems associated with land management and suitability based eco-climatic region were identified and documented for scaling up by ICFRE under the World Bank funded SLEM project. Some of the identified SLEM best practices which can be adopted and upscaled under ESIP are listed below:

- System of rice intensification
- Wadi - a tree-based farming system
- Integrated farm development for sustainable land productivity
- Rain water harvesting and augmentation of water resources
- Chauka System for management of common property resources for sustainable livelihood and adaptation to climate change
- Livelihood diversification through integrated production systems
- Lac cultivation for livelihood generation and biodiversity conservation
- Agro-biodiversity innovations
- Rehabilitation of degraded bamboo forest
- Managing ground water for adaptation to climate change
- Mulberry cultivation: A diversification climate change adaptation practice for sustainable livelihood
- On-farm conservation of genetically important crop landraces of rajma
- Agarbatti preparation from degraded bamboo forests
- Sustainable land and ecosystem management in shifting cultivation areas
- Aonla based agroforestry
- Climate change adaptation by promotion of fodder and pasture development for animal-based farming system in the hills

- Sustainable management of resources for livelihood improvement through watershed management in the hills
- Participatory model for water harvesting and development of community pastures
- Livelihood diversification through integrated production system
- Eco-restoration and institution strengthening
- Improving pasture management and livestock rearing
- Climate-proofing fish farming

Approaches for mainstreaming of SLEM: Despite scientific advances in understanding the causes and outcomes of land degradation and the need for its restoration, the adoption of SLEM practices is still limited. Although principles and practices of SLEM are well-known and are increasingly promoted at the policy and operational level, land degradation is still increasing and becoming a major global threat (Sanz *et al.*, 2017). This may be due to a wide gap between the acceptance of the SLEM practices and their implementation. Mainstreaming of SLEM in all the land-based programmes and projects are needed for achieving the sustainable development goals as well as ecosystem based solutions for the land-based problems. The approaches for mainstreaming of SLEM should include:

- Involvement of the stakeholders and their experiences in preparation of information, education and communication materials on SLEM
- Preparation and dissemination of information, education and communication materials on SLEM especially in the local languages
- Enhanced participation of stakeholders in decision making and sharing information for planning, implementation and monitoring & evaluation of SLEM activities
- Designing action plan for information, education and communication
- Strengthening of community-based institutions for improved governance at the local level
- Developing of strong networks for convergence with other government programmes
- Capacity building of communities/ stakeholders for better understanding and adoption of SLEM practices

Importance of communication in SLEM scaling up: Communication is an essential part of any planning process and it helps to achieve objectives within a stipulated time frame as well as to multiply the impact of programmes/ projects for which it is designed (Assifi and French, 1985). In addition, communication is best viewed as a two-way process with 'participation' and 'dialogue' as crucial elements (FAO, 2017). In any organization, pool of human resources which comprises scientists, development administrators and functionaries serves as communicators at various levels and plan their roles and responsibilities which are delivered based on expression, interpretation and response. If the expression is not clear and lack clarity, audience is not interested, having lack of clarity, the accurate interpretation becomes difficult and proper response is lost. As a result, desire messages developed will not reach to the intended beneficiaries in a way that can gain a common understanding of the meaning, intent and use of such communicated messages. In such case the entire planning and management used in communicating the messages are lost which eventually affect the

success of any programme/ project/ scheme.

The scope of communication is vast ranging from assessment of communication outreach materials to need based action plans for communication throughout the project cycle. Its scope is observed both in the community involvement and institutionalized operations for implementation of activities of any programme/ project/ scheme. Community involvement includes empowering of communities, facilitation, participatory and bottom up approach, identifying community needs and resources, building the capacity of communities and other stakeholders, ensuring accountability and learning by doing. In case of institutionalized operations for implementation of activities, dimension ranges from institutional arrangements, motivation-based relationship among the target beneficiaries and stakeholders for the empowerment of community through capacity building (Mozammel and Schechter, 2005). It also helps in understanding the psychological, social, cultural and economic dynamics within and across stakeholder groups directly or indirectly involved in the development process. It also combines information, education, mobilization, behaviour change and capacity building activities through knowledge and learning. At another level, communication is also central in influencing policy makers, stakeholders and legislators in increasing national capacity for monitoring the status of land degradation and desertification and track associated process and indicators to identify key drivers of land degradation, and generate and exchange knowledge to address land degradation issues and combating desertification (FAO, 2017).

Approaches for achieving communication objectives in SLEM scaling up: According to GTZ (2006), the approach for achieving communication objectives assess situation analysis, problem identification, beneficiaries and their knowledge, attitude and practices; planning of communication strategy development, participation of target groups, media selection and production. The approach should also be based on project activities that help to provide a clear operational direction and facilitate a meaningful review. There are four communication approaches mostly used either independently or in combination. These include:

- **Informing:** Information provided to the beneficiaries for which appropriate step could be taken to solve the problems with mutual consent.
- **Educating:** This information is effective only when the beneficiaries are educated with the effect of the problem and develop consensus and strategic planning to ratify it.
- **Persuading:** The information and education have better results when it persuades the beneficiaries to take proper decision. It helps in reaching out to decisions or build consensus so that it is possible to control and govern the information in right direction.
- **Entertaining:** Information, education and persuading shows effective result in communication when it provides boundless entertainment to people through pictures, films, music, drama, dance, art, literature, comedy, sports, games etc.





2. Role of Communication in SLEM Scaling up

Communication can be applied for effective decision-making, planning and implementation of project activities, community mobilization and collective growth in the successful implementation of projects. The communication strategy will cover all aspects of the project implementation framework and planning including interaction between the target communities, gender sensitivity, capacity building, media outreach and involvement of project beneficiaries and other stakeholders in the project implementation. The basic idea of communication strategy is to work with people not for people. Traditional approaches of communication normally involve top-down approaches and campaigns. A sound communication strategy achieves a balance between the top-down and bottom-up approaches known as the multi-dimensional communication approach. The multi-dimensional communication approaches include the following three:

- Educate, learn and affect behavioural change for improving their capacities
- Build relationships, network and mobilize community organizations for collective decision-making forums for improved governance and leverage the collective strength to liaison and converge with other programmes/projects/ schemes
- Capacity building of the local communities through adopting the communication strategy

For developing an effective communication strategy analysis of socio-demographic structure of the project areas, messages for communication and communication tool need to be done. Details with respect to socio-demographic analysis of ESIP project areas, messages for communication and communication tools are described as under:

Socio-demographic Analysis: Ecosystem Services Improvement Project (ESIP) is being implemented in the states of Madhya Pradesh and Chhattisgarh. The project has targeted to cover 25000 ha of land and 5000 direct beneficiaries in the ESIP project areas of Madhya Pradesh and Chhattisgarh for scaling up of Sustainable Land and Ecosystem Management (SLEM) best practices. ESIP areas for SLEM scaling up in Madhya Pradesh comprise 36 villages falling under five forest ranges viz. Bhaura in North Betul Forest Division, Budhni in Sehore Forest

Division, and Sukhtawa, Itarsi and Banapura in Hoshangabad Forest Division. ESIP areas for SLEM scaling up in Chhattisgarh comprises 35 villages falling under four forest ranges viz. West Pandariya in Kawardha Forest Division, Pali in Kathgora Forest Division, Marwahi in Marwahi Forest Division and Rangunathnagar in Balrampur Forest Division for implementation of the project activities. The geographic spreads of the project areas are given in Table 1.

Table 1: Geographic spreads of the project areas

ESIP Areas in Madhya Pradesh		
Forest Division	Forest Range	Villages
North Betul	Bhaura	Tetar Mal, Tetar Ryt, Kachhar, Koyalari Ryt, Koyal Buddi, Banabehda, Bhatna, Kuppa, Handipani
Sehore	Budni	Chachmau, Khatpura, Hathlewa, Pahar Khedi, Paraswada, Saidganj, Akola, Naganpur
Hoshangabad	Banapura	Banapura, Nanderwada, Jondhal, Sota Chikhali, Gotabarri, Narri, Chandakhad, Keolajhir, Salai, Bhawanda, Banspani, Pipalgota, Nayagaon, Ghoghara
Hoshangabad	Itarsi	Khatama, Lalpani, Bhatna, Ranjhi
	Sukhtawa	Kohda, Pipariya Khurd
ESIP Areas in Chhattisgarh		
Forest Division	Forest Range	Villages
Balrampur	Rangunathnagar	Babhani, Shankarpur, Rameshpur, Raghunathnagar, Nawgai, Kesari, Girwani
Marwahi	Marwahi	Bahrihorki, Amera Tikra, Banshital, Danikundi, Mouharitola, Naka, Matiyadand, Thiatola (Rumga), Madai, Patharra, Kolbira, Silpahari
Kawardha	West Pandaria	Taitarni (Damgarh), Rukhmidadar, Amaniya, Amlitola, Neur, Bhangitola (Polmi), Rokhani, Rahidand (Bangar), Bagharra
Korba	Pali	Kodar, Karra Nawapara, Kanhaiyapara, Karanawadhi, Chanwari Para, Jamnipani, Parsapani

Total geographic area of the project area is 51241.54 ha in both the states and the area outside the forest is about 28397 ha in which SLEM practices can be scaled up (Table 2).

Table 2: Details of the project area

ESIP Areas	TGA (in ha)	Forest Area (in ha)	Area under Non-Agricultural Uses (in ha)	Barren & Un-cultivable Land Area (in ha)	Permanent Pastures and Other Grazing Area (in ha)	Land Under Misl. Tree Crops (in ha)	Culturable Waste Land Area (in ha)	Fallows Land other than Current Fallows Area (in ha)	Current Fallows Area (in ha)	Net Area Sown (in ha)
MP (36 villages)	24729.04	10538	667.5	329.18	875.14	84.77	1920.42	498.41	541.16	7017.58
CG (35 villages)	26512.5	8612.93	768.63	4470	2690.51	68.26	319.57	598.38	960.9	8023.29
Total (71 villages)	51241.54	19150.93	1436.13	4799.18	3565.65	153.03	2239.99	1096.79	1502.06	15040.87
Total area under barren & un-cultivable land area, permanent pastures and other grazing area, land under miscellaneous tree crops etc, culturable waste land area, fallows land other than current fallows area and current fallows area							13356.7 ha			
Net Area Sown							15040.87 ha			
Total area for SLEM scaling up (net area sown + barren & un-cultivable land area etc.)							28397.57 ha			

As per the Census of 2011, the total population of the ESIP areas of Madhya Pradesh was 21391 in 2011 with 65.81% being tribal population. The percentage males and females was 52% and 48% respectively. Demographic details of the project areas of MP and CG are given in Table

3. Average literacy rate as per the socio-economic surveys conducted by ICFRE in the project areas of MP is 56% out of which 60% is reported for males and 40% for females (ICFRE, 2020 a). The working population in ESIP areas of MP belongs to farming (40%), agricultural labourers (53.5%) and services & business (6.5%). According to the Census of 2011, total population of the ESIP areas of the Chhattisgarh state was 9974 in 2011 with a 66% of tribal population. The percentage of males and females in the project area was 50%-50%. The average literacy rate as per the socio-economic surveys conducted by ICFRE in the project areas of CG is 66% out of which 61% is reported for males and 39% reported for females (ICFRE, 2020 b). The working population in ESIP areas of CG belongs to farming (48%), agricultural labourers (48%) and services & business (4%).

Table 3: Demographic details of the project area

ESIP Area	Total Households	Total Population	Total Male Population	Total Female Population	Total Scheduled Castes Population	Total Scheduled Tribes Population
MP (36 villages)	4335	21391	11036	10355	2015	14077
	Percentage		51.59	48.41	9.42	65.81
CG (35 villages)	9974	41058	20519	20539	3181	27205
	Percentage		49.98	50.02	7.75	66.26
Total (71 villages)	14309	62449	31555	30894	5196	41282
	Percentage		50.53	49.47	8.32	66.10

Strengths, weaknesses, opportunities and threats (SWOT) analysis in communication:

A SWOT analysis is a general framework for development of communication strategy and planning for identifying organization's internal strengths and weakness as well as its external opportunities and threats. The internal analysis considers factors such as resources, processes and deliverables. The external analysis considers factors that characterize environment like topographic, demographic, social conditions, target audience along with economic, social and political issues. SWOT analysis for developing communication strategy for scaling up of SLEM practices is given in the Table 4 and these are taken into consideration for developing a communication strategy for scaling up of SLEM.

Table 4: SWOT analysis for developing communication strategy for scaling up of SLEM practices

Strengths	<ul style="list-style-type: none"> ▪ Well established government institutions at national and state levels for the execution of SLEM programmes/ schemes/ projects ▪ Experience and learning of the SLEM related programmes and projects ▪ Availability of good practices and success stories related to sustainable land management under different government schemes/ programmes/ projects ▪ Access to m-kisan, kisan call centre, Kisan SMS portal, buyer seller platform and National Agriculture Market (e-NAM), Kisan Suvidha, IFFCO Kisan Agriculture, RML, Farming-Krishi Mitra, Pusa Krishi, Agri App, Kenti Badi, etc. ▪ Access to other portals and applications related to natural resource management through technological interventions ▪ Availability of various social media tools
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Weaknesses	<ul style="list-style-type: none"> ▪ Poor documentation of SLEM practices ▪ Weak extension framework for transfer of SLEM practices to the local communities and land user groups of the remote rural areas ▪ Poor access to the developed SLEM practices/ technologies to the local communities and land user groups ▪ Weak community participation in implementation of the SLEM programmes/ schemes/ projects ▪ Lack of extension materials in the local vernacular languages/ dialects
Opportunities	<ul style="list-style-type: none"> ▪ Extension of the SLEM practices and knowledge products to the communities and other land users ▪ Networking of government institutions working on SLEM ▪ Networking of the SLEM practitioners in sharing experiences and knowledge on SLEM ▪ Community participation in planning, execution and monitoring of SLEM related activities presence of print and electronic media ▪ Strong ▪ Development of knowledge dissemination/ communication tools
Threats	<ul style="list-style-type: none"> ▪ Use of unsustainable SLEM practices by local communities and land user groups resulting in low agriculture productivity, poor soil health and adverse environmental impacts ▪ Lack of alternate livelihood option ▪ Limited finance for scaling up of SLEM practices

Noticing the limited reach of communication media in rural areas, the strengths and opportunities identified in scaling up of the SLEM practices will help in providing extensive network and extension services to harness the power of interpersonal communication. The different communication tools and methods are designed by different government departments in the form audio–visual aids, flyers, posters, leaflet, success stories on agroforestry, tree-based farming system, agro-horticulture, sustainable agriculture practices with respect to water management practices to improve the health and productivity of the land on sustainable basis, need to be used. This will help in developing messages and designing of knowledge products on SLEM for communication. Adoption of SLEM practices that address the issues of land degradation and climate change also require more multi-disciplinary approaches which include new tools and techniques that can lead to informed decision making and effective knowledge sharing mechanisms for facilitating new learning and behavioural change of the local communities for scaling up sustainable land and ecosystem management practices. It also becomes imperative to communicate complete and right messages in a planned manner to the right beneficiaries and stakeholders for sustainable land management.

Messages for communication: Perceptions, needs, ideas and conditions are diverse within a community, depending on members’ socio-economic status, geographical remoteness, gender, and other factors. The communication needs to draft messages for each group and choose appropriate media, methods and format to ensure inclusion, participation and empowerment.

The message must be understood by the intended project beneficiaries and other stakeholder and suit their characteristics, educational level, culture and language (FAO, 2014). It should also be appealing and thought-provoking, and should fit into the communication methods and tools selected to deliver the message. The message will be different for a brochure, pamphlet, poster, TV and radio talk, folk media, short documentary, etc.

A message is designed for changing behaviour pattern, mind set and clarifying issues on roles and responsibilities of the beneficiaries/ stakeholders. Ideally, the development of messages for each group of beneficiaries/ stakeholders emerge out of exercises such as brainstorming sessions, community meetings, focus groups discussion, reinforcing the message and feedback during the training and workshops. Consultative workshops are to be organized other than discussion with local community members for designing communication messages in any programme/ project. The state public relations department as well as publicity and extension units of different line departments like agriculture, livestock and poultry, irrigation, and rural development of the respective states will be actively involved in the planning as well as in implementation stages to achieve maximum spread of the key messages. State units of press information bureau, directorate of audio-video publicity, field publicity bureau, song and drama division etc. can be contacted and the services of these units can be pooled in for wider coverage of messages.

Communication tool: A communication tool is the vehicle that transmits a message from the source to the beneficiary/ audience. Communication tools are to be selected to fit the target groups and the messages to be communicated on SLEM scaling up. Criteria for selection of the communication tools are based on geographical coverage, matching the target groups based on access, preferences, degree of familiarity, credibility, cost, impact and participation. Some of the effective communication tools are interpersonal or face-to-face interaction, group discussion and mass media such as radio, television, film, newspapers, magazines, posters, newsletters, flyers, reports, leaflet, flyers, brochure, wall painting, folk media and internet.







3. SLEM Communication Strategy

A communication strategy has been developed for scaling up of SLEM practices in the selected landscapes of Chhattisgarh and Madhya Pradesh under Ecosystem Services Improvement project. The objective of the communication strategy is “to facilitate knowledge and experience sharing, dissemination of best practices and success stories for scaling up of SLEM in the ESIP areas of Chhattisgarh and Madhya Pradesh”.

The strategic objectives of communication strategy for scaling up of SLEM practices are as under:

- To create awareness among the local communities of the project areas about government programme/ project/ scheme related to implementation of the SLEM practices and convey messages for adoption of the SLEM best practices
- To build the capacities of local communities of the project areas on scaling up of SLEM best practices
- To disseminate knowledge, experiences and information on SLEM practices through developing suitable knowledge products in Hindi and other local languages
- To develop suitable communication tools for effective dissemination of the information to the local communities and other stakeholders of the project areas
- To mobilize the local communities of the project areas for their effective participation in implementation and adoption of the SLEM best practices of the project areas

Beneficiaries of SLEM practices

Direct beneficiaries of the SLEM scaling up under ESIP include 25,000 people of ESIP landscapes of Madhya Pradesh and Chhattisgarh states. The indirect beneficiaries of the project include larger population in these states which will benefit from improved forest quality and ecosystem services such as improved water flows, climate amelioration, and land productivity. Target groups of SLEM communication strategy are grouped as under:

1. **Primary target group:** The primary target group will be the members of Gram Panchayat, Joint Forest Management Committees, Biodiversity Management Committees, Shelf Help Groups, forest dwellers, small landholders, marginal farmers and landless livestock holders.

2. **Secondary target group:** The secondary target group will be State Forest Departments of Madhya Pradesh and Chhattisgarh as well as other line departments and organizations of CG and MP states which are dealing the land issues such as Departments of Agriculture, Horticultures, Soil and Water Conservation, Tribal Development and Social Welfare Departments
3. **Special target group:** Special target group will include representatives of Krishi Vigyan Kendras, Van Vigyan Kendras and non-governmental organizations, audio-video and print media.

Designing of communication messages on SLEM practices

The key messages of SLEM mostly address sustainable land productivity, improve water use efficiency and water conservation, improve soil health and livelihood enhancement. Sanz *et al.*, 2017 stated that SLEM approaches were critical for preserving ecosystem functions as a whole to ensure that ecosystem services will be improved or maintained. Related to this, a number of new concepts and paradigms have been appeared during the last decade, related directly or indirectly to sustainable land management such as ecosystem based approach; ecosystem-based adaptation; ecosystem-based mitigation; integrated land management; integrated landscape management; landscape approach; nature-based solutions. All these concepts converge towards striving for a sustainable interaction between natural and human systems. Keeping this in mind, the messages designed in SLEM highlights the sustainable interaction between natural and manmade systems directly or indirectly. In this context, messages will be focused on the probable causes/ barriers/ risks that prevent the scaling up of the SLEM practices (Table 5).

Table 5: Designing of communication messages for SLEM scaling up with respect to challenges/ barriers/ risks

Challenges / barriers/ risks	Communication messages
Use of unsustainable farming practices resulting in adverse environmental impact	<ul style="list-style-type: none"> • Do's and don'ts in farming practices. • What are the different methods of sustainable agriculture practices such as: crop rotation, integrated pest management, agroforestry and soil conservation, etc. • Low cost organic farming practices like bio-pesticides and bio-fertilisers, etc.
Low agriculture productivity due to monoculture-based agriculture practices giving less return from agriculture field and affecting the ecological goods and services	<ul style="list-style-type: none"> • Integrated farm development for sustainable land productivity to integrate multiple component of the agriculture system such as crops, horticulture, livestock, fisher, agro-forestry with agro based income generation activities and value addition.
Rainfed agriculture system left smaller selection of crop, lack of other irrigation sources, low ground water recharge and soil erosion	<ul style="list-style-type: none"> • Information on water conservation measures for sustainable irrigation and augmentation of ground water recharge and reduction in soil erosion. • <i>In-situ</i> water harvesting using simple technologies (vegetative barriers, gravel and stone mulching, compartmental bunding, inter-plot rainwater harvesting, dug out ponds, percolation tanks, ridges and furrows).

Lack of awareness among the local communities about government schemes and programme related to agriculture, irrigation and sustainable livelihood	<ul style="list-style-type: none"> Information on various sustainable agriculture practices schemes like Pradhan Mantri Krishi Sinchayee Yojana with the vision of extending the coverage of irrigation '<i>Har Khet ko pani</i>' and improving water use efficiency '<i>More crop per drop</i>', etc.
Lack of involvement of local communities in planning, execution and monitoring of project/ programme/ scheme related to SLEM	<ul style="list-style-type: none"> Participatory approaches in planning, execution and monitoring of SLEM activities Gender mainstreaming in SLEM scaling up
Lack of access to technologies, practices, or tools related to SLEM scaling up	<ul style="list-style-type: none"> Information on sustainable agriculture technologies, practices, or tools related to SLEM

Mode of communication for SLEM

Following communication modes are proposed to be used for communicating the SLEM messages to the beneficiaries and other stakeholder of the project areas for scaling up of SLEM practices:

- 1. Demonstrations:** A live demonstration often proves a very effective mode of communication. It provides a good way to show how to do something. Demonstration may also include role-playing to make it even more real. It enables the group to understand better the cause of a problem or the result/ consequences of an action. Exposure visits of the project beneficiaries need to be organized for live demonstration of the tested and proven SLEM practices.
- 2. Wall paintings/ poster designing and printing/ hoarding:** It is one of the effective and popular modes for raising awareness among the local communities through wall painting which may be given utmost importance as tool for the dissemination of knowledge and creation of awareness on SLEM scaling up in the project areas. Details of SLEM practices to be scaled up in the project areas need to be displayed in all the offices of Gram Panchayats/ JFMCs and other common places (such as *panchayat bhawan*, community centre, *anganwadi kendra* and fair price shop etc.) which are frequently visited by the local communities of the project areas. Posters on SLEM practices need to be designed and printed on SLEM best practices for awareness generation of the local communities of the project areas.
- 3. Organisation of capacity building programmes:** Training or capacity building activities is one of the significant and effective modes of communication. It is recommended that there is a high level of synergy between communication and capacity building activities, as the objective of both activities is same, *i.e.*, to create an enabling environment in the project areas for implementation of the project activities.
- 4. Organisation of workshops:** Experience sharing and presentations by the SLEM practitioners in thematic workshops can be organized to develop the capacity of the local communities of the project areas on scaling up of SLEM practices as well as for their adoption.
- 5. Printed material:** Printed material like pamphlets, posters, flyers, brochures and success stories on scaling up SLEM practices need to be developed. Printed materials should

be dominantly pictorial in nature with simple, colloquial text in large font size. It is also important to share information based on success stories of planning and execution by the communities. A highlight of such stories encourages the communities to participate in the project and learn different proven and tested SLEM best practices adopted by the communities across the country depending upon the need and available resources. Research papers and study reports on SLEM scaling up also need to be developed for targeting the natural resource managers, policy planners and researchers.

6. **Media outreach:** Positive and correct perceptions about the SLEM scaling up under the project in the media are very critical for communicating the messages to the target groups as well as for wider publicity and learning on SLEM best practices. Media outreach will cover important daily Hindi newspapers, TV news tools and popular Hindi magazines. A comprehensive media outreach strategy need to be developed for SLEM scaling up under the project.
7. **Folk media:** Some of the prominent forms of folk media for communication are folk dramas, street plays (*Nukkad Natak*), folk dances and folk songs. These have existed for time immemorial and continue to be popular in rural and tribal areas even today. As these folk forms are in local languages, dialects and use local familiar costumes, and these are easy to comprehend and effective in communicating messages on SLEM to the local communities of the project areas. Street plays for communicating the messages on SLEM scaling up need to be organized in each and every village of the project areas.
8. **Use of audio-visuals:** Audio-visuals can be one of the effective and people-friendly communication tools preferred by the local communities. Audio-visuals can be used for communicating the messages of SLEM scaling up. Short messages on radio and TV may prove to be very useful to establish an effective communication on SLEM scaling up. Hiring of mobile van (equipped with TV/Video/microphones) can be used as an effective source for spreading SLEM awareness and conveying the messages in local dialects for adoption of the SLEM best practices. A web site and mobile app can be developed for effective communication of messages for scaling up of SLEM best practices. Short documentaries on SLEM success stories/ SLEM best practices developed and adopted by the progressive farmers and other SLEM practitioners need to be developed for communicating the messages on scaling up of SLEM practices to local communities of the project areas.
9. **Door-to-door contact campaigns:** Social mobilization and awareness generation on SLEM scaling up for local communities can be carried out door to door by conducting door-to-door contact campaigns. Printed materials like pamphlets, posters, flyers, brochures and success stories on scaling up SLEM practices can also be distributed to the local communities in these campaigns.

Generally, the basis for selection of communication tools is challenges/ barriers/ risks analysis for effective communication of messages. Suggested tools on SLEM scaling up are given in the Table 6.

Table 6: Communication tool with respect to the challenges/ barriers/ risks

Challenges/ barriers/ risks	Communication tool
Lack of awareness on scaling up of SLEM practices	<ul style="list-style-type: none"> • Mass media • Face-to-face interaction

Lack of access to technologies, practices, or tools related to SLEM scaling up	<ul style="list-style-type: none"> • Group meeting/ Focus group discussion
Use of unsustainable farming practices resulting in adverse environmental impact	<ul style="list-style-type: none"> • Face-to-face interaction • Group meetings/ Focus group discussion • Mass media (Audio/ Video) • Internet (website and mobile app) • Print media • Folk media
Lack of awareness of the local communities on government schemes and programme related to agriculture, irrigation and sustainable livelihood	<ul style="list-style-type: none"> • Mass media (Audio/ Video) • Print media • Face to face interaction • Folk media
Selection of SLEM best practices according to the climate, topography, soil quality	<ul style="list-style-type: none"> • Group meeting/ Focus group discussion • Mass media (Audio/ Video) • Print media • Internet (website and mobile app)

Action plan for implementation of SLEM communication strategy: An action plan for implementation of SLEM communication strategy need to be executed in a phased manner as under:

- The first phase of implementation plan will focus on awareness generation among key target beneficiaries of the project areas. Sensitization and community mobilization of the local communities to adopt SLEM best practices related to integrated farm development, crop diversification, soil and water conservation and income generation activities will be taken up. It will also focus on the objectives of the project for addressing the issue of land degradation through scaling up of SLEM practices in the project areas. This phase has already been covered through organizing face-to-face interactions, focused group discussion and meetings/ consultations during the first - three years of the project implementation. Street plays (Nukkad Natak) etc. will also be organized for creating more awareness and easy understanding of SLEM adoption for scaling up. However, awareness generation is still required and the same can be done as per the requirement of the project beneficiaries.
- The second phase of implementation plan will be focused on capacity building of the target beneficiaries on technical know-how of SLEM best practices and their scaling up through organization of training programmes, exposure visits, workshop, distribution of printed materials in Hindi and other local languages/ dialects, mass media, documentary shows. This phase will also cover preparation and printing of outreach materials based on the needs and demands of the project beneficiaries of the project areas. Second phase is under implementation for the last two years of the project and will be completed in the current financial year.

- During the third phase, efforts will be made on developing a network of the project beneficiaries of the project areas for adoption of the SLEM practices as an essential tool in addressing environmental, social and economic challenges and generating benefits at the local level. This phase will also include development of knowledge platform on the SLEM scaling up and networking of the SLEM practitioners.

Details of the action plan for implementation of SLEM communication strategy in the selected landscapes of Chhattisgarh and Madhya Pradesh is as under:

S. No.	Messages of Communication	Mode and tool of communication	Number of Event/ Item	Target Groups	Timelines
A. First Phase of implementation of SLEM communication strategy					
1.	Awareness on SLEM scaling up	<ul style="list-style-type: none"> Demonstration (Exposure visits) Wall paintings/ hoarding Media outreach Skit shows (Nukkad Natak) and awareness through hiring mobile display vans 	10 71 71	Project beneficiaries of ESIP areas of CG and MP and other stakeholders	Initially for the first two years of the project implementation. However these can be extended further, as per the requirement of the project and beneficiaries.
B. Second Phase of implementation of SLEM communication strategy					
2.	Capacity building of the target beneficiaries on technical know-how of SLEM best practices and their scaling up	<ul style="list-style-type: none"> Trainings Workshops Printed materials in Hindi and other local dialects, and distribution Short documentary on SLEM You tube channel for SLEM 	150 07 40 02 01	Project beneficiaries of ESIP areas of CG and MP and other stakeholders	Entire project period
C. Third Phase of implementation of SLEM communication strategy					
3.	Networking of the project beneficiaries, SLEM practitioners and development of knowledge sharing platform for SLEM scaling up	<ul style="list-style-type: none"> Website Audio-visuals Mobile app 	01	Project beneficiaries of ESIP areas of CG and MP and other stakeholders	Last two years of the project

Review of implementation of SLEM communication strategy

Implementation of the communication strategy of SLEM can be reviewed periodically every quarter basis by the project functionaries to assess the flow of information to the target beneficiaries as well as measure to be adopted for effective implementation at the ground level. SLEM communication strategy needs to be reviewed on the basis of following proposed indicators:

- Number of exposure visits organised for project beneficiaries for live demonstration of the SLEM practices
- Number of wall paintings, poster designing and printing and hoarding installed on SLEM scaling up
- Number of capacity building programmes organized on SLEM scaling up
- Number of face-to-face interactions/ focused group discussion organized on SLEM scaling up
- Number of workshops organized on SLEM scaling up
- Number of printed materials like pamphlets, posters, flyers, brochures and success stories on scaling up SLEM practices developed
- Number of knowledge products developed and distributed on SLEM
- Number of media outreach related to SLEM covered in daily Hindi news papers, TV news tools and popular Hindi magazines
- Number of radio/TV talks organized on SLEM scaling up
- Number of folk events like folk dramas, street plays (*Nukkad Natak*), folk dances and folk songs etc. organized on SLEM scaling up
- Number of audio-visuals developed on SLEM scaling up
- Number of mobile app developed and mobile app used related to SLEM
- Number of SLEM best practices disseminated through developing web site and number of the users of the web site
- Number of short documentaries developed on SLEM success stories/ SLEM best practices

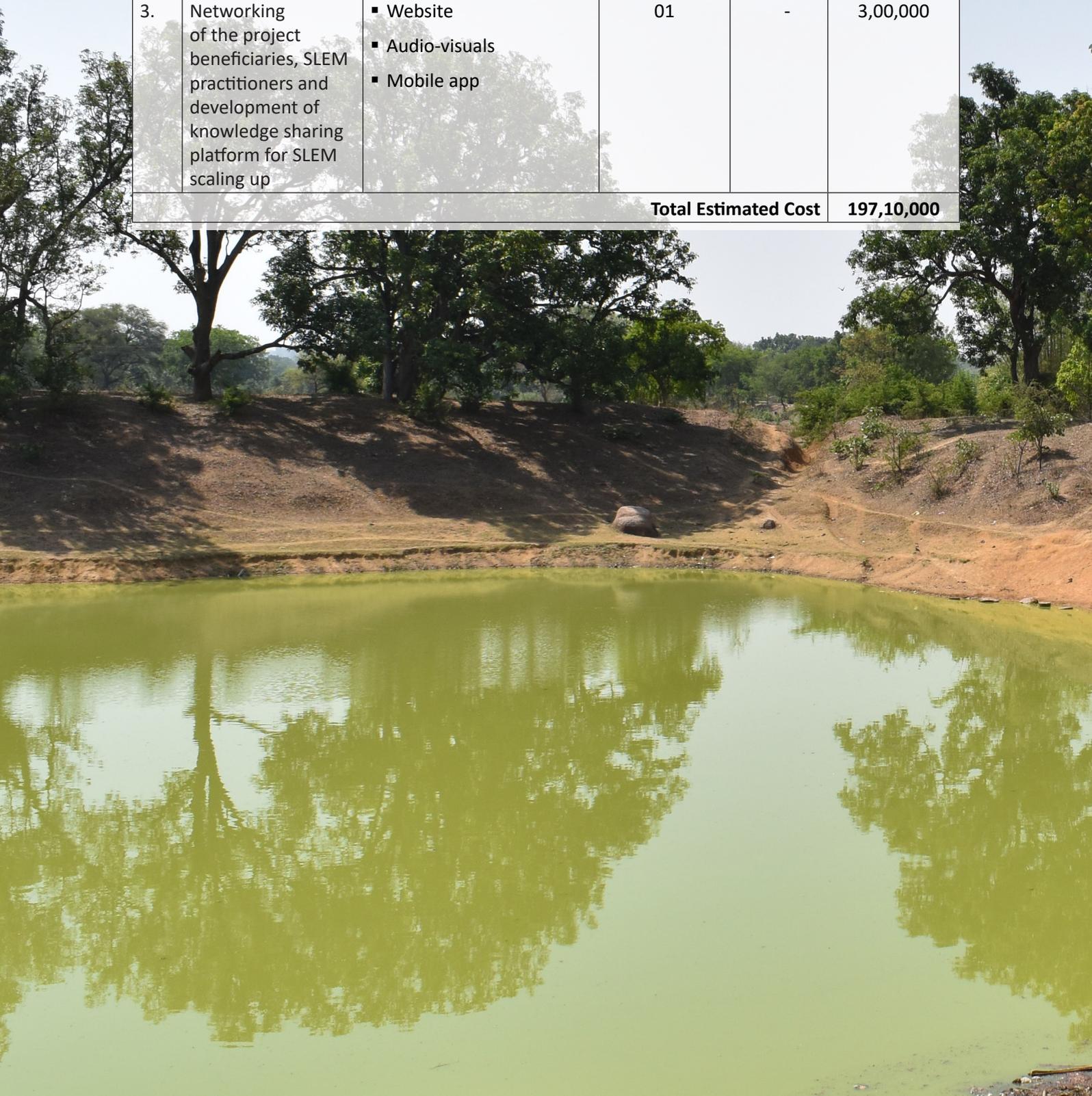
Budget to scale up the implementation of SLEM Communication Strategy

The communication plan becomes more concrete with the inclusion of detailed budget requirement for implementation of the communication strategy. Details of the indicative budget to be required for implementation of the communication strategy for SLEM scaling up in the project areas of MP and CG under ESIP are given in Table 7. ESIP-PIU, ICFRE will be responsible for implementing the SLEM communication strategy in the ESIP landscapes of Chhattisgarh and Madhya Pradesh.

Table 7: Indicative budget estimates for implementation of the SLEM communication strategy

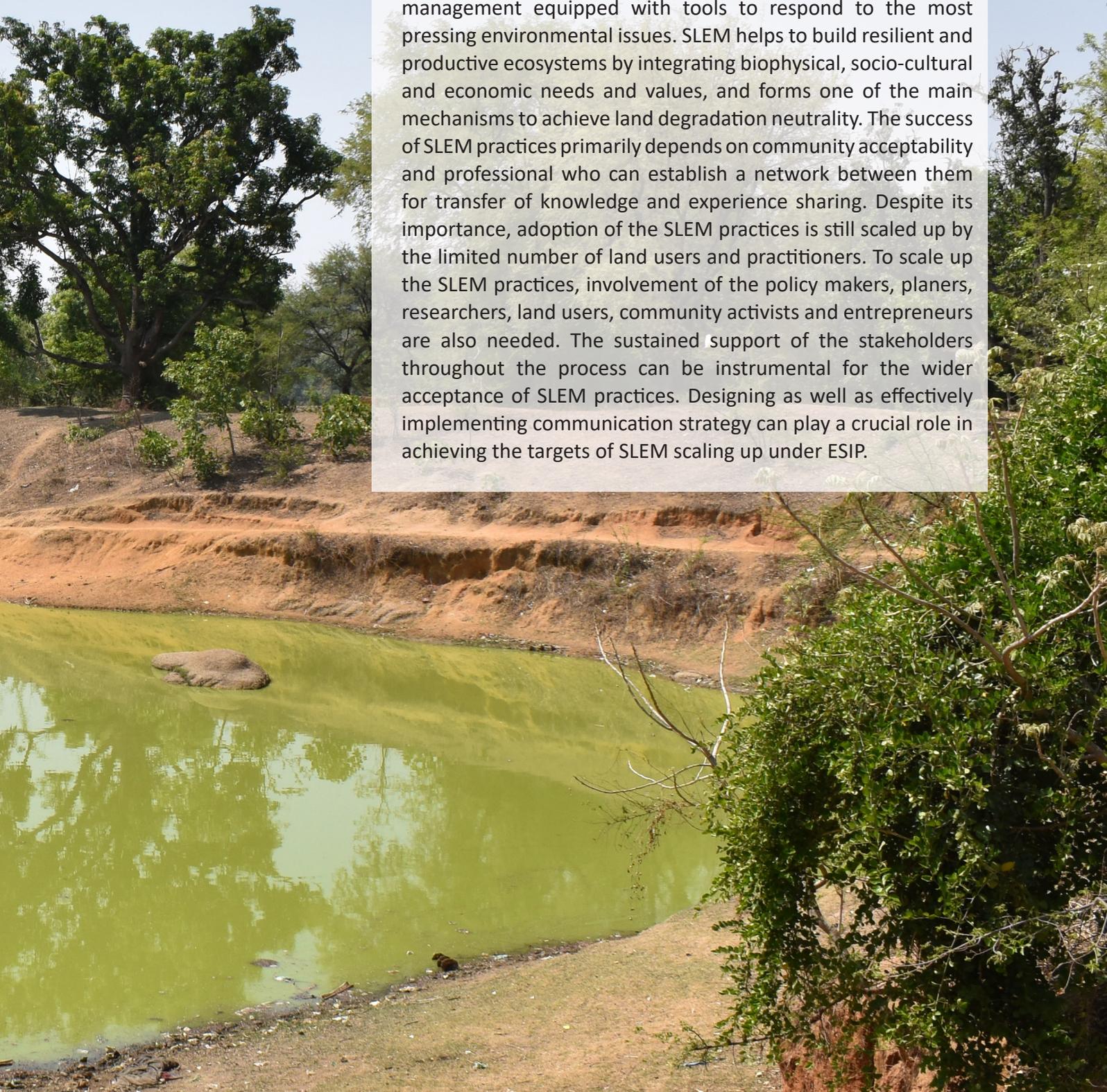
S. No.	Messages of Communication	Mode and tool of communication	Number of Event/ Item	Tentative rate INR	Estimated cost INR
A. First Phase of implementation of SLEM communication strategy					
1.	Awareness on SLEM scaling up	<ul style="list-style-type: none"> ▪ Demonstration (Exposure visits) ▪ Wall paintings/ hoarding ▪ Media outreach ▪ Street plays (<i>Nukkad Natak</i>) 	10	150000	15,00,000
			71	10000	7,10,000
			71	100000	71,00,000

B. Second Phase of implementation of SLEM communication strategy					
2.	Capacity building of the target beneficiaries on technical know-how of SLEM best practices and their scaling up	▪ Trainings	150	30000	45,00,000
		▪ Workshops	10	100000	10,00,000
		▪ Printed materials in Hindi and other local dialects, and distribution	40	100000	40,00,000
		▪ Short documentary	02	300000	6,00,000
C. Third Phase of implementation of SLEM communication strategy					
3.	Networking of the project beneficiaries, SLEM practitioners and development of knowledge sharing platform for SLEM scaling up	▪ Website ▪ Audio-visuals ▪ Mobile app	01	-	3,00,000
Total Estimated Cost					197,10,000



4. Conclusion

The threat of land degradation, combined with the effects of climate change, continues to put the security and stability of the world's population at risk. To build a more secure, sustainable and resilient future, effective and innovative measures and approaches and practices that address the environmental issues and challenges from a multi-dimensional perspective are required. Sustainable land and ecosystem management equipped with tools to respond to the most pressing environmental issues. SLEM helps to build resilient and productive ecosystems by integrating biophysical, socio-cultural and economic needs and values, and forms one of the main mechanisms to achieve land degradation neutrality. The success of SLEM practices primarily depends on community acceptability and professional who can establish a network between them for transfer of knowledge and experience sharing. Despite its importance, adoption of the SLEM practices is still scaled up by the limited number of land users and practitioners. To scale up the SLEM practices, involvement of the policy makers, planers, researchers, land users, community activists and entrepreneurs are also needed. The sustained support of the stakeholders throughout the process can be instrumental for the wider acceptance of SLEM practices. Designing as well as effectively implementing communication strategy can play a crucial role in achieving the targets of SLEM scaling up under ESIP.





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**Indian Council of Forestry
Research and Education**
(Autonomous body of Ministry of Environment,
Forest and Climate Change, Government of India)
P.O. New Forest, Dehradun – 248006