Chapter-2 Theory and Concept

This chapter is devoted to the development of theoretical orientation for the study. Theoretical orientation provides the rationale for ideas. Toulin (1974) stated that theoretical ideas of a science are not something separate and apart from ideas in general, for example, the idea that guides practice in technology, policies and other areas of extra scientific life. This would reduce the chances of misconception.

Micro-Communication

Micro Communication is the art of small scale, interpersonal communication. It is the type of human communication that determines their worth. Strong micro communication gives a foundation of trust, confidence and worth. It allows you to better sell your macro communication strategy and win an account. It is important to note that many nontraditional campaigns and even social networks use a mixture of macro and micro. Being able to combine the two will make for better advertising in an increasingly segmented world. Using the lens of semiotic analysis (the study of signs and meaning), will address the variety of signals through which the values of caring and compassion are communicated,

expressed and understood. Semiotic analysis can focus attention on microcommunication. By analyzing the visual and audio visual, they can recognize, discuss and appreciate the variety of nuanced communication, which collectively contribute to expression and perceptions of empathy and respect. The use of semiotics, the study of signifiers and meaning, as a framework for understanding allows unconscious behavior and habitual ways of interaction to become conscious. Once these micro aspects of interaction are made visible, they can be understood, practiced and integrated into everyday life.

Intercultural communication is a form of global communication. Basically intercultural communication refers to the effective communication between people/ workers/ clients of different cultural background. People have a misconception that intercultural communication is all about dealing with different languages. Though Intercultural communication deals with handling different languages, it also includes managing thought patterns and non verbal communication too. It is used to describe the wide range of communication problems that naturally appear within an Organization made up of individuals from different religious, social, ethnic, and educational backgrounds. Intercultural communication is sometimes used synonymously with cross-cultural communication. In this sense it seeks to understand how people from different groups and cultures act, communicate and perceive the world around them. As a separate notion, it studies situations where people from different cultural backgrounds interact. Aside from language, intercultural communication focuses on social attributes, thought patterns, and the cultures of different groups of people. It also

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 22

involves understanding the different cultures, languages and customs of people. Intercultural communication plays a role in anthropology, cultural studies, linguistics, psychology and communication studies. Intercultural communication is also referred to as the base for international businesses. There are several cross cultural service providers around who can assist with the development of intercultural communication skills. The social network is one factor determining the flow of information within communities and as such may be important in determining successful implementation of community based management.

The following is the comparative statements to present what a Micro Communication is different from general communication.

General Communication	Micro Communication
	Micro Communication involves
General communication, as a	source of origin, value addition to
process, involves a source, a	messages, social scrutiny and auto-
channel and receiver	transmission in a small community
General Communication starts	Micro communication spreads on a
with a message and ends with its	spiraling mode and possibility of
arrival at the receiving end so it is	distortion of facts is very high
basically linear in model	
General Communication is	Micro- Communication is basically
cosmopolite	informal in nature
in nature	
In general communication, the	In Micro Communication the
message and outcome are	spatial distribution may exert a
dominating	lot of operational impact
General Communication process	Micro Communication process
follows a linear or curvii-linear	follows a cyclic model.
pattern	

Intercultural Communication

Intercultural Communication occurs when a member of one culture produces a message for consumption by a member of another culture. More precisely, intercultural communication involves interaction between people whose cultural perceptions and symbol systems are distinct enough to alter the communication event. The definition of intercultural communication must also include strands of the field that contribute to it such as anthropology, cultural studies, psychology and communication.

There are many researchers and academics of note within the intercultural field, who, naturally all have different definitions of 'intercultural communication'. For example Karlfried Knapp defines it as "Intercultural communication,' can be defined as the interpersonal interaction between members of different groups, which differ from each other in respect of the knowledge shared by their members and in respect of their linguistic forms of symbolic behaviour."

Intercultural communication can also be defined as the sharing of information on different levels of awareness and control between people with different cultural backgrounds, where different cultural backgrounds include both national cultural differences and differences which are connected with participation in the different activities that exist within a national unit.

Communication

The term communication stems from the Latin word "Communis", meaning common. According to Rogers and Shoemaker, Communication is the process by which messages are transferred from a source to receiver.

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 24

Leagans defined communications as the process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of the meaning, intent and use of messages. Communication then is a conscious attempt to share information, ideas, attitudes and the like with others.

Communication and Social Systems

Communication is related to social organization in at least three ways. First, social systems are produced through communication. The development of a role system presumes prior communication among members of the system. Through role-taking, interaction, a group of people become interdependent. Uniformities of behavior, interdependence of goals, the commonalities that are involved in a system, pressures to conform to norms – all these are produced through communication among group members.

Communication increases the likelihood of similarities among people, increases the chances the people can work together to accomplish a goal. The allocation of position, the specification of role-behaviors, the teaching of normative modes of behavior is all accomplished through communication.

Once a social system has developed, it determines the communication of its members. Social systems affect how, why, to and from whom, and with what effects communication occurs. For example, our social position within a system increases the probability that we will talk to people in equal or adjacent positions and lowers the probability that we will communicate with people whose positions are either much higher or much lower than ours.

Social organization limits the range of receivers for a given individual, limits the number of people with whom he transmits and receives messages. The system also determines in part what kinds of message content will be transmitted to whom by whom. We transmit the content that is an appropriate to our own roles. We tend to avoid content that is not appropriate to our own roles – unless we are dissatisfied with our roles and are trying to change to another position.

Communication affects the social system. The social system affects communication. Neither can be analyzed separately without distorting the nature of the process. One of the significant ways in which the communication process and the social process are interdependent is in the area of uniformity of behavior. People who have communicated with each other for a period of time tend to have similar behavior patterns. The tendency toward similarity is a prerequisite to the development of a system. As the old proverb puts it, birds of a feather flock together.

Social systems are related to communication in a third way. The operations of a system can be used to make predictions about how members of that system will behave. Knowledge of a social system can help us make accurate predictions about people, without the necessity of empathizing, without the necessity of interaction, without knowing anything about the people other than the roles that they have a in the system.

For every role there is a set of behaviors and a position. If we know what the behaviors are that go with a role, we can predict that those behaviors will be performed by people who perform that role. Second, if we know

what behaviors go with a given rank or position, we can make predictions about people who occupy that position.

There are certain behaviors that go with the role of nurse, student, union president, mother, oldest son, secretary, executive in top authority position, lawyer. Through experience, we learn which behaviors accompany which roles. When we meet a person who occupies a given role position, we can predict something about his behavior. We can hypothesize that he will do such and such a thing because he is a student, that he will perform certain behaviors because he is a doctor, etc.

Even if we do not know a person as an individual, even if we have had no prior communication with him to determine his attitudes, his knowledge"s, his communication skills, we still can make fairly accurate predictions from knowledge of his position in one or more social systems.

We also can make predictions from knowledge of group norms. There are certain characteristic behaviors of the members of a given organization. When we learn that a person is a member of that organization we can make predictions about his behavior – providing that we are aware of the norms of the group.

TYPES OF COMMUNICATION

Verbal communication

Verbal communication is a type of communication where the information flows through verbal medium like words, speeches, presentations etc. In verbal communication the sender shares his/her thoughts in the form of words. In organizations, individuals communicate verbally among each

other in the form of dialogues, speech, presentations, and discussions to name a few. The tone of the speaker, the pitch and the quality of words play a crucial role in verbal communication. The speaker has to be loud and clear and the content has to be properly defined. Haphazard and unorganized thoughts only lead to confusions and misunderstandings among individuals. In verbal communication, an individual must understand the importance of words and how to put them across.

While speaking the pitch ought to be high and clear for everyone to understand and the content must be designed keeping the target audience in mind. In verbal communication it is the responsibility of the sender to cross check with the receiver whether he has downloaded the correct information or not and the sender must give the required response.

Non Verbal Communication

Facial expressions, gestures, hand and hair movements, body postures all constitute non verbal communication. Any communication made between two people without words and simply through facial movements, gestures or hand movements is called as non verbal communication. In other words, it is a speechless communication where content is not put into words but simply expressed through expressions If one has a headache, one would put his hand on his forehead to communicate his discomfort - a form of non verbal communication. Non verbal communications are vital in offices, meetings and even in romantic chats.

Visual / Written Communication

Before planning any outing or tour, Sandra always refers to the map of that place. Through the map, she tries to find out more about the place, the route

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 28

to reach that place, hotels, shopping joints etc. The map is actually passing information about the place to Sandra or communicating with Sandra. This mode of communication is called visual communication. In visual communication, the recipient receives information from signboards, displays, hoardings, banners, maps etc. The sign board of Mc Donald"s or KFC indicates eating joints - a form of visual communication. The sign board of "No Parking Zone" communicates to the individuals that any vehicle must not be parked in the vicinity - again a mode of visual communication. Vision plays a very important role in visual communication and it depends on the recipient how to interpret the message.

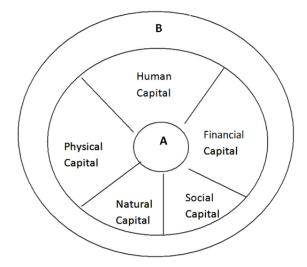
COMMUNICATION AND SUSTAINABLE LIVELIHOOD

Livelihood Generation

A livelihood comprises the capabilities, assets, and activities required for a means of living. It is deemed sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities, assets, and activities both now and in the future, while not undermining the natural resource base.

Information and communication issues currently receive only limited treatment in the literature on Sustainable Livelihood approaches but are central components in the framework in that they provide the linkages that maintain its dynamic structure. In order to achieve desired livelihood outcomes information must be communicated throughout the framework to inform decision-making at every level. Through a process of iterative diagnosis and feedback, information generated within the Sustainable

Livelihood framework should contribute to a constant learning process that influences project design and contributes to poverty focused institutional and policy reform (Pasteur, 2001). Sustainable Livelihood thinking illustrates that there are many different livelihood strategies that can be developed by working with the assets, policies, principles and institutions in each context to affect positive change. In each and every case, information and communication are central driving forces of change. Understanding the local level information needs of the rural poor, as the ultimate beneficiaries, is centrally important to the development of effective projects, programme and policies in support of sustainable livelihood. The particular role of information at the livelihood level can be usefully conceptualized in terms of a livelihoods information wheel.



In order to help define the role of information in support of sustainable livelihood the diagram separates information into two categories (**A** and **B**). These categories are not intended to represent two completely distinct types

of information but rather the dual role that information can play in support of sustainable livelihoods over time. A represents the information for longterm capacity building involving education, training and technical support appropriate for the livelihood development of individuals or groups. This core information contributes to the enhancement of an individual"s knowledge. It improves understanding of the systems and processes that can affect the way that assets are used in the longer term, and assists in the planning of livelihood strategies. **B** represents information for short-term decision making that is used to maximise the potential of a particular asset at any one time, reduce vulnerability to shocks and respond to immediate needs. The two types of information can support any one or all of an individual"s assets but the relative importance of information relating to a particular asset is largely context specific. The typology (A+B information to support long-term livelihood strategies and short-term livelihood activities) is not intended to be comprehensive in its representation of the role of information in support of sustainable livelihood but is indicative of a systematic and differentiated approach to information needs assessment that can usefully inform the design of more people-centred policies and programmes in support of sustainable livelihood.

The livelihoods information wheel provides a reference point to help focus project design on differentiated information needs. Participatory approaches underpin sustainable livelihood and a particular value of the approach lies in the inclusive, non-threatening *process* of designing poverty interventions that it encourages, in addition to whatever improved project/programme outcomes it achieves. Information and communication initiatives are key to

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 31

enhancing the benefits of this process. A people-centred approach can also help the poor to use information and communication technologies for their own needs rather than just receiving information in the form of messages from external sources. This requires enhanced two way information flows between beneficiaries and policymakers.

Debate regarding new ICTs centers on the identification of opportunities for the poor to use ICTs to manage information that is appropriate for their different needs.

This requires "local appropriation" of ICTs by communities so that they can be adapted to their own social, economic and cultural processes. It is evident that effective promotion of sustainable livelihoods requires changes in institutions and attitudes, knowledge and information levels, processes and skills. Improved understanding of skills at different levels enables the identification of appropriate systems and institutions for the delivery of information in support of sustainable livelihood.

Local Level Information for Rural Livelihood Activities and Strategies

Some three quarters of the world's poor live in rural areas and, according to projections, a majority of the poor will continue to live in rural areas well into the 21st century (IFAD, 2001). The rural poor depend primarily on agriculture and related activities for their livelihood; agriculture provides the bulk of their income and their main source of nutrition. A complex range of information is required by rural people and community organizations to pursue individual and collective livelihood activities and formulate sustainable livelihood strategies. Richardson (1997) in a report for the FAO stresses the need for an integrated approach to information for

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 32

rural and agricultural development. An approach that "begins with the needs of rural people and grassroots agricultural organizations and works to establish vertical and horizontal channels of communication" is consistent with a participatory, people centered SL approach to information management. Richardson notes that "participatory development is fully dependent upon communication and information sharing processes" and that in order to deal with the unprecedented challenges of food insecurity and poverty, people at *all* levels of society "must be able to access critical information and communicate". Understanding the information needs of these primary stakeholders is an essential starting point if higher level policy and planning processes are to effectively support sustainable livelihoods in rural areas.

Promotion of sustainable rural development strategies, including sound management of natural resources, is a central concern of agricultural information systems. Smallholder farmers in many parts of the world reach productivity levels that are only one third of the potential yield under optimum conditions (IFAD, 2001). Principal reasons for low productivity include weak (or non-existent) extension services, lack of competitive markets and lack of suppliers for seeds, fertilizers and rural financial services. Together these factors reduce either the possibilities or incentives for increasing agricultural productivity. The lack of information available to the rural poor is a major constraint to increased agricultural productivity. Agricultural extension, education and training can help many farmers maximize the potential of their productive assets. Farmers need up-to-date information on sources, availability and cost of agricultural inputs, and also

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 33

on the potential of different techniques and technologies used for the production and processing of agricultural goods. Smallholders can substantially increase their yields by adopting better methods, seeds and fertilizers whilst delayed adoption of new technologies among poor farmers can lead to exclusion from market opportunities. Tripp"s (2001) assessment of future agricultural technology policies for rural development emphasizes that most of the new technologies that will become available to farmers will be "information intensive", i.e. requiring increased levels of knowledge for appropriate management.

In addition to basic technical knowledge, the rural poor need to be able to operate in increasingly sophisticated input and output markets. Information about the role and responsibilities of different institutions in the provision of key services is equally important. The rural poor also require better information about rural development programmes supposedly designed to benefit them. Farmers also need to know where to go and who to ask for different types of information. Law, for example, is a crucial topic for rural people – key questions concern inheritance, women"s rights to land and relationships between crop raisers and herders (Mundy and Sultan, 2001). Agricultural credit is another crucial topic. Legal and financial disputes are common because rural people do not have access to basic legal and financial information. This creates a climate of distrust, which constrains investment in agriculture. Longer-term strategies are increasingly going to be dependent on information relating to international markets, to determine opportunities and potential challenges to sustainable livelihoods. Globalisation and continuing liberalisation of agriculture has substantially

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 34

changed the policy and institutional environment in which poor farmers operate. Previously the cost of inputs and output market prices were fixed and known, but now smallholders are increasingly exposed to the vagaries of the open-market. Most poor farmers are ill-equipped to cope, they do not understand how markets work or why prices fluctuate and are vulnerable to rapid changes in market conditions. Accessing information on market conditions, prices and quality of produce from physically remote locations is extremely difficult. Groups of poor farmers are often isolated from each other with little collective organisation, limited experience of market negotiation and little understanding of ways in which to influence the terms and conditions under which they enter the market.

Linking Micro and Macro-Levels

Information can provide a *catalyst* for people identifying and setting their own goals and priorities. Information systems should be inclusive. Once a process of exchange has been stimulated with the help of external actors (NGOs, development projects, extension service, etc.) it is important to ensure the system can be locally adopted (Michiels and Van Crowder, 2001) and used to ask questions and seek answers of local relevance with increasing frequency. This can support immediate livelihoods needs and longer-term experimentation and training. Information must also be reliable in order to support the decision-making process of poor farmers and their communities. For this reason longer term monitoring and support may be required. The quality of local information has already been the focus of farming systems analysis developed by the FAO and it has been recommended that micro-level information should be further utilised for

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 35

agricultural programme and policy analysis. Although a livelihoods approach would put a greater emphasis on the use of micro level information, quality monitoring at this level is equally important. Relevant types of local information (qualitative and quantitative) can be categorised as *biophysical*, relating to factors such as soil fertility and crop yields and *socio-economic*, including cultural patterns, prices and household incomes (Dixon et al., 1994). The types of micro-level information that are identified as being useful for an improved diagnosis of agricultural problems and the identification of policy options can be expanded to include a range of community information for broader rural development strategies. The monitoring and analysis of micro-level information could contribute to the process of stimulating local solutions based on reliable and comparable information.

The relevance and reliability of information should be monitored not just for improved policy analysis, but also to promote adoption at the local level. The importance of the reliability of information systems applies equally to different sources of information. The reliability and relevance of information should to be understood and monitored within the local context of the user group, in order to build on local patterns of use and trust to improve information quality.

In this context, information on food and agriculture should be particularly focused on local agro-ecological conditions, weather and topography, as well as local cultural and economic aspects of production, marketing and processing. The information needs to be transparent and up to date with change-related information, supported by local cases of successful

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 36

implementation and adoption of new approaches. Historically, agricultural information transfer at the local level can be seen to have contributed to technology transfer on a large scale, and therefore acting as a catalyst for widespread adoption.

COMMUNICATION AND FOOD SECURITY

Food Security

The World Food Summit of 1996 defined food security as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life". Commonly, the concept of food security is defined as Including both physical and economic access to food that meets people's dietary needs as well as their food preferences.

Developing country governments are increasingly aware that they have a major responsibility for rural development and food security, but lack the capacity and solutions to meet the challenge. In 1996, the world"s heads of state meeting in Rome committed their countries to eradicating hunger and reducing the number of undernourished people by 50% by the year 2015 (FAO 1998). While on the one hand the agricultural yields in developing countries continue to decline, despite technological innovations, their populations continue to expand beyond food production capacities. This poses a great challenge for developing countries; policy and decision-makers thus have to identify possible and appropriate solutions that ensure rural development and food security.

Food security can only be achieved "when all people at all times have access to sufficient food for a healthy and productive life, and has three

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 37

main components: food availability, food access, and food utilization" (Haddad 1997). This entails creating effective and efficient agricultural systems that supply food and foster utilization of natural resources in a sustainable manner. Although "agriculture is the principal engine of growth in many low-income developing countries, where it accounts for 60 to 80 percent of all employment" (CGIAR 1995), food security should also be linked to environmental, social, cultural, political and institutional aspects of society.

Access to desirable, sufficient, safe and nutritious food is a basic component of development and health of a society. Thus, when developing country goals and priorities, food security is of utmost importance. Most observers of rural development believe that, currently, the necessary condition for obtaining food security is information. Knowledge and information are important factors to ensure food security, and ICTs have the ability to present the information required for improving food security. Different strategies exist for obtaining food security; the use of information and communications technology is one of these strategies. ICTs consist of various collections of resources and technical tools that are used for connecting, spreading, storing and managing information. In other words, ICT represents the collection of hardware and software that is used for producing, preparing, transferring and storing data via devices such as computers, radios, televisions, etc., and it includes an extensive scope of traditional and modern media.

The information revolution is one of the interventions with the potential to ensure that knowledge and information on important technologies, methods

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 38

and practices are put in the right hands. The relevance of this revolution is supported by Balit (1996) who pointed out that the least expensive input for rural development is knowledge. Knowledge and information are basic ingredients of food security and are essential for facilitating rural development and bringing about social and economic change. Rural communities require information inter alia on supply of inputs, new technologies, early warning systems (drought, pests, and diseases), credit, market prices and their competitors. The success of the Green Revolution in Asia and the Near East indicates that giving rural communities access to knowledge, technology and services will contribute to expanding and energizing agriculture.

Traditional media and new ICTs have played a major role in diffusing information to rural communities, and have much more potential. There is need to connect rural communities, research and extension networks and provides access to the much needed knowledge, technology and services. Traditional media have been used very successfully in developing countries, and rural radio in particular has played a major role in delivering agricultural messages. Print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations have also been used to speed up the flow of information. New ICTs, however, have the potential of getting vast amounts of information to rural populations in a more timely, comprehensive and costeffective manner, and could be used together with traditional media.

Although the internet is not a panacea for food security and rural development problems, it can open new communication channels that bring

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 39

new knowledge and information resources to rural communities. Traditional communication channels have been used successfully but these have been monologic and have not allowed for much interaction with users. Radio for example has been very effective for disseminating information to all types of audiences, but broadcasting times are sometimes not appropriate for most people. But radio could be linked to the internet, and a few initiatives have been started on this concept, such as the project *Internet Radio in Sri Lanka*. This enables users to access programme on the web at a convenient time, and send feedback through e-mail or chat. Broadcasters could then disseminate the latest information promptly.

Weak linkages between researchers, frontline workers and farmers have been a major constraint that has resulted in research findings not being applied by poor rural farmers. ICTs can improve and strengthen these linkages and ensure knowledge and information, which are essential for improving food security are communicated to all stakeholders.

One major constraint for delivery of food security initiatives in rural areas is weak institutional capacity and insufficient co-ordination. Nongovernmental organizations and the private sector in particular possess a vast but often untapped potential. FAO could seek partners to fund capacity building activities. The partnership could also assist with building the required human and institutional capacities at national and regional level to provide training and education to rural communities on how to manage local knowledge and information, using ICTs. Training materials produced could be availed as electronic archive of training resources, and could be

repackaged in preferred media. The resources could then be translated into major languages to ensure that most developing countries benefit.

It has been stated that "achieving an integrated rural Internet development approach in a given nation or region requires the collaborative participation of agencies, organisations and government services" (Richardson 1997). The Strategy for Co-operation would thus be to work through international co-operation to harness synergies of the respective partners. FAO could, therefore, forge alliances and coalitions with other international, regional, national, donor, multilateral and development agencies, public and nonpublic institutions and rural groups. The partnership could then work jointly in planning and implementing initiatives that seek to harness ICTs for food security and rural development

Multipurpose community telecentres could play a key role in the "information renaissance" in developing countries and ensure universal access. Locations for telecentres must be carefully selected, and should take into consideration the "level of potential demand for communication and information services from a large number and wide range of users", its to other organisations and institutions, infrastructural proximity considerations and socio-cultural issues (Anderson et al 1999). The information systems established should be multi-sectoral (agricultural research, extension, training and education, and health) and use a mix of appropriate traditional media and new ICTs depending on preferences of the users. All relevant stakeholders should facilitate the evolution of appropriate ICT policies in developing countries and work towards a common goal of ensuring rural development and food security. Where the

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 41

infrastructure is not yet developed, the internet could be used from a central point (telecentre) for online broadcasting and for exchanging relevant information from developing countries. The telecentres will also provide a stage for rural communities to address their training and development needs and vision.

Food security attainment is, however, unlikely to be realised by provision of information alone and developing country governments must invest much more in impoverished rural areas where the greater population lies. "Governments are much better placed to formulate overall objectives and priorities, and to articulate a coherent strategy at the national level" (CTA 1999), as they have the machinery to bring about food security and rural development through a wide range of mechanisms. Organisations advocating for the use and application of ICTs for information sharing and exchange must therefore work closely with developing country governments.

As the full dimensions of the transformation initiated by Information and Communications Technologies (ICTs) has become more widely understood, the means by which these might be integrated into and enhance the opportunities in such areas as "rural development" have begun to come to the force. But in a context where there are severe limits to the accessibility and utility of the technology particularly for those outside of urban areas and in developed world contexts, the question arises as to how these opportunities might be realized not just in the abstract as a sense of possibility, but within the real context of specific conditions and limitations

in the range of developing world contexts and specifically for those in rural areas.

Actions such as identifying and assessing appropriate ICTs for fulfilling participatory needs, ensuring appropriate ICTs for improving food security, ensuring appropriate software and hardware, providing equal access to ICTs for all people, considering clientele needs in presenting programs and information, investing in ICTs and promoting technical-information infrastructures for this purpose are essential. To improve the role of information and communications technologies in increasing the food accessibility of rural households, solutions such as the use of appropriate content from old technologies, for example, radios and televisions, for increasing individual power for searching accurate information, rapid access to update information, improving the quality of required information, more consideration to needs of rural households and designing mechanisms for decreasing costs of access to ICTs for all people, are highly recommended.

In order to apply ICT in rural areas for improvement in food security, there is some important work to be done before implementing the ICT, including: Being experienced Facilitators/ trainers in regarding how to use ICT in rural areas, Literate rural population, Presentation of appropriate information by government, the using of appropriate ICTs, the provision of Clientele-oriented programs, investments in ICTs, the preparation of technical-informational infrastructure and capacity-building of local community.

To improve the role of information and communications technologies in increasing the food availability of rural households, solutions such as the

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 43

use of appropriate content from old technologies, for example, radios and televisions, for increasing food production, introducing new methods and technologies, preparing the necessity condition for applying scientific principles in producing agricultural production, improving interactions and communication, improving extension services, improving interactions among researcher, extensionist and farmers and providing information about the planting and harvesting of agricultural products are highly recommended. In addition to, being of experienced facilitators for vulgarization and preparing condition for using ICTs among rural households is important.

A Rural Development program will need to respond to issues of literacy (or rather, illiteracy), the very large numbers of languages (some without written scripts) and the range of cultures and religions that are found within the Developing World. An absence of literacy may in part be handled through the paraprofessional extension worker who acts as a translator between the world of text and the world of speech. However, many of the available resources are in text form and it will require a major and costly effort to provide these in a manner that an individual with a only limited education (such as the paraprofessional extension worker) could make this usefully intelligible to the community user. Similarly with making resources available in the various local languages-in some cases there may be dozens of languages just within the catchment area of the telecentre. Whether the extension worker could be expected to undertake these kinds of translations is a question and certainly as little of this as possible should be required if only to avoid mistranslation and mistakes. Culture and cultural or religious

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 44

sensitivities will have to be assessed on a local and pragmatic basis. The various telecentres will need to experiment with what information or services will be acceptable (or unacceptable) in particular contexts.

COMMUNICATION AND AGRICULTURAL DEVELOPMENT

Knowledge and information are important factors for accelerating agricultural development by increasing agricultural production and improving marketing and development. ICTs can enhance the integration and efficiency of agricultural systems by opening new communication pathways and reducing transaction costs, given greater accessibility of information on prices, transportation and production technologies.

In an era of globalization accompanied by rapid technology change, a country"s competitiveness and relevance in the global economy is increasingly determined by its capacity to effectively use information for design, production and marketing (Dzidonu, 2002). A growing mode of delivery in this environment is by Information and Communication Technologies (ICT) that capture and store digitally encoded data, manipulate and transform these data, and then transmit and share the results. There has been rapid development of information technologies internationally in the last two decades. Studies from Newly Industrialised Countries (NICs) and the developed world have shown that ICT can positively contribute to economic growth and development (Hamelink, 1997). It is further argued that ICT have the potential to reduce poverty and improve livelihoods by empowering users with timely knowledge, reducing transaction costs, and appropriate skills for increasing productivity (Kenny,

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 45

2000). The dynamism of ICT is thought to promise fundamental change in all aspects of life, including knowledge dissemination, social networking, economic and business practices, political engagement, education, health, leisure, and entertainment. It is also believed that ICT are useful either as tangible goods in their own right or as value-adding services and they therefore assist the development efforts made by governments.

Research designed to provide empirical evidence of this relationship has most often adopted a broad macro approach in its analysis. As a result, such studies have tended to make rather general statements drawing attention to the high correlations between higher levels of economic output and intensities of ICT access (Sridhar and Sridhar, 2004; UNDP, 2003). Other research has studied the correlation between the level of socioeconomic development and use of information or the size of the information sector. Reference is often made to the contribution of information to development at a global, national or regional level. In the context of developing countries, ICT are sometimes identified as being central in efforts to escape poverty arising from their potential benefits for increasing incomes of the poor and enhancing overall national social and economic growth Attempting to quantify this aspect, the UNDP (2005b) examines the role accorded to ICT in the Poverty Reduction Strategy Paper (PRSP) process being followed in many countries.3 In 13 of the 21 countries surveyed ICT were mentioned as being of specific importance to rural and agrarian development, and in 4 additional countries, as being central to wider poverty reduction efforts.

As with other economic sectors, effective agricultural development requires access to information on all aspects of agricultural production, processing and marketing and it seems likely that if anything this need is increasing (Jones, 1997). ICT is already showing the potential to play an important role in the delivery of this information to this sector in both developed and developing countries (Zijp, 1994).

In most cases the base technology is universal, rather than being specific to agriculture (Warren, 2002), and hence usage evolves from existing designs and practices. The FAO distinguishes broad categories through which ICT are used in the agricultural sector. These are technical and economic development for agricultural producers; community development; research and education; small and medium enterprise (SME) development; and media networks (FAO, 2006)

Technical and Economic Development for Agricultural Producers

As with any change in technology, the economic impact of ICT occurs through improvements in efficiency and increasing productivity. This can take place in different ways including improving efficiency in resource allocation, reducing transaction costs, and technical improvements that result in an outward shifting of the production function (Wolf, 2002). In particular, through the provision of information from a source that is relative affordable, accessible and broadly available, ICT can contribute to the reduction of uncertainty in activities and transactions, reduce the extent to which markets are thin, missing or incomplete, and reduce the extent to which information asymmetries can be exploited by the relatively informed to extract rent when transacting with the relatively uninformed.

There are numerous instances where improved production and market information is important to farmers who are often a particularly vulnerable group. These might include extension and research on adoption of new crop varieties, mechanization, pests and weed control, processing and the care of livestock. As the FAO (2006) observed, technology and what can be accomplished with it has implications for rural communities and producers of all sizes, whether these are larger commercial producers who need to understand global market situations that affect them or subsistence producers concerned with local input markets (FAO, 2006). This is particularly relevant in the agriculture sector which is an activity that is often highly dependent on externally determined requirements. Government, parastatals and private sector agri-business frequently regulate commercial agricultural production by placing requirements on quality, safety, logistical arrangements and even quotas. Inputs to the agricultural sector may be similarly affected, including seed, fertilizers, pesticides and herbicides as well as livestock feed and veterinary services.

An example of how the development of agricultural producers can be enhanced by using ICT is though what is known as site-specific management, also called precision agriculture. This refers to a knowledge intensive management strategy that involves the application of information technology to crop production. The literature provides many examples of ICT applications in this domain, including uses in the application of chemical samples, application of fertilizers, application of herbicides, application of liquid fertilizers, application of pesticides, and so forth, as well as activities for efficient resource management such as livestock

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 48

movement regulations .Pathways of development can include crop expansion and increased production where basic crop production is the dominant activity, and similar management strategies can be used in livestock farming.

Community Development

In addition to ICT usage that might be of direct use to agricultural production, rural communities in developing countries frequently are in need of more broad-based development than the interventions just described. Such areas are often removed from important services and resources and hence have urgent infrastructural investment priorities needed, as well as a need for community-based institutions to deliver services. Some of the priority areas for ICT and rural community development include lowering the cost of communication, universal access, and the development of human resources, including health and education. ICT have the potential to encourage greater inclusion of individuals within the network due to their immediacy and reach, which promote faster and efficient data, thereby overcoming the barriers of physical distance (Torero and von Braun, 2005).

Media centres are an important innovation in this regard and provide a central place where the public can receive and make use of information. This can include information on the services that government, the private sector, civil society and others provide and how to access this support. This might include assistance for small businesses, how to access social grants, advice on health or education, employment opportunities and even constitutional rights. These centres are equipped with ICT such as

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 49

telephones, fax and computers with access to various kinds of information (Falch and Anyimadu, 2003).

However, getting agricultural sector participants to computer networking and become users of ICT requires some minimum level of expertise, and this has often been cited as one of the major constraints (Warren 2003a). There is also a need to assess how effective are multi-purpose community centres and the telecentres which have been set up by governments in giving people access to ICT. This requires some level of investigation via proper research methods and education into ICT for agricultural development.

Research and Education

The third use of ICT relates to its potential to bring about transformation in agricultural through the enhancement of education and research though the Agricultural Science and Technology Innovation (ASTI) System. Perhaps the most straight-forward way in which this can occur is through the conventional agricultural extension system. Traditional Training and Visit extension is a comparatively costly approach requiring the preparation, printing and dissemination of training material, large numbers of trained extension officers who carry the messages to be conveyed, and the risk that messages may become distorted when they are eventually conveyed. Extension officers who are connected through ICT will be better able to update their knowledge on a continuous basis than in the past, avoiding the criticism that the information provided by these services is often irrelevant or out-of-date. This approach does not require any ICT capacity on the part of the farmer, and as a result, may be relatively simple to implement

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 50

However when farmers are digitally literate a range of new opportunities become available. For example, email conference systems are a way in which new agricultural technologies can be disseminated as is cyberextension using exciting new developments such as internet telephone/Voice over Internet Protocol/VOIP which would permit live Question and Answer sessions. In the rural context, ICT research and education range from enterprise management information systems to text message census and survey data in remote areas. In this way ICT can be used for agricultural research surveys and censuses completing a "virtuous circle" of information exchange.

Media Networks

Marketing systems absorb surpluses through e-commerce, improving the efficiency of agricultural products in circulation. Through agricultural e-commerce, the transactional capabilities of this innovation include allowing customers to submit and modify orders on-line, pay on-line, and automatic notification of order status. Companies can also provide useful information to suppliers on its own website, such as customer feedback, inventory information, production schedules, product demand information (actual and forecasted) on-line. At less direct level, simply being able to pool knowledge with other producers through email correspondence could be an invaluable route for the transmission of information and innovation. In a similar vein, in several countries radio listening clubs have emerged as a new form of association for women having the double benefit of receiving information and building supportive linkages (Hafkin and Odame, 2002: 27).

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 51

AGRICULTURE IN NORTH-EAST INDIA

Agriculture is an important sector in the economy of the NER, with its share in State Domestic Product (SDP) ranging from 19 percent to 37 percent in different states. This contribution of agricultural sector in SDP has declined during the past three decades. This is though considered a sign of development, population dependent on agriculture remains very high. As a result, agriculture in the region has not been able to generate surpluses for investment and augment purchasing power, not to speak of employment generation. Moreover, factors like natural calamities, large number of smallholders, low intensity agri-inputs and negligible seed/variety replacement are also threatening the livelihood-sustainability in the region. Agriculture in NER is characterized by:

- Geo-physical conditions limit horizontal expansion of cultivable land. The percentage of cultivated area to total geographical area ranges from 2.2 percent (in hilly states like Arunachal Pradesh) to 35.4 percent (Assam), as compared to 43.3 percent at all-India level.
- Domination of a single crop of rice vulnerable to risk and low level of productivity.
- Prevalence of traditional agricultural practices and low productivity. The shifting cultivation (*Jhum*) is one such system.
- Agricultural diversification of crops, livestock-fish and silk exist in the region, but their contribution to economic development is negligible, as reflected in the low per capita income

Dominance of Rice: Rice is the major staple crop commonly grown in the NER states. But the rice-based agriculture system has failed to provide required household income-security. Rice is a three-season crop, viz, autumn (*Ahu*), winter (*Sali*) and summer (*boro*) in Assam. Although winter rice accounts for more than two-thirds of total rice area, but the average yield is 1.53 ton/ha, which is nearly half a ton less than the national average during the triennium ending 2003. A notable change in rice production system is the introduction of *boro* rice in Assam.

Boro rice is a low risk option with yield 30 to 40 percent higher than the normal yield. It has increased cropping intensity, leading to a situation of surplus production in Assam. This successful venture should be replicated in other states also.

Shifting Cultivation: This slash-and-burn system of cultivation (*Jhum* practice) is a unique feature of the region, which covers nearly 2 million hectares area (one-fourth of the total cropped area). The system faces criticism due to its low productivity and environmental diseconomies, but provides support to about 443 thousand *jhumia* households. On account of diversified nature of the system, the *jhum* cultivation provides not only food security but also household nutritional security. Most importantly, it has potential to enhance system productivity too. Being a socially-preferred practice, instead of banning, it needs a focused system based R&D to improve the overall productivity and food security.

Tea: It is a commercial crop grown entirely by corporate sector, and occupies nearly half a million hectares in NER. But recently, the government intervention as in Assam, has enabled some of the entrepreneur

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 53

farmers to undertake tea cultivation. It can provide ample scope for income generation but its impact is yet to be examined.

Crop Diversification: A large number of households in the NER practise crop diversification by growing multiple crops as well as livestock, fishery, piggery, etc. High-value crops like fruits and vegetables, oilseeds, spices and nuts are also widely grown in the region. Fruits and vegetables occupy the second place (12% area share) next to rice. Interestingly, not only the area allocation is high, the proportion of households growing fruits and vegetables is also high. Area under other crops is also growing and the notable gainer includes fibres, sugarcane, rubber, sericulture, coffee, arecanut and coconut. Floriculture is also expanding rapidly. But, a huge potential remains untapped due to a number of constraints and institutional rigidities. The growth in productivity of major staple crop, rice, has been slower than that of population, which may lead to food insecurity in the region. Barring Assam, the entire region is foodgrain-deficit. The region produces nearly 5 million tons of foodgrains as against a demand of 6.7 million tons. This imbalance in food-security remains unabated due to slow growth in production as well as productivity of major foodgrains.

Specific Problems of Agriculture in NER

- Adherence to traditional agricultural practices
- Low adoption of modern rice varieties (HYVs) of rice. Barring Tripura it ranges from 23 per cent to 49 per cent as compared to 74 per cent at the national level
- Problems of property right

- Small size of operational holdings, ranging from 0.60ha in Tripura to 1.33 ha in Meghalaya as compared to 1.42 ha at all-India level
- High vulnerability to natural calamities, and degradation of prime agricultural land
- Over-dependence on monsoonal rains with poor irrigation infrastructure. Proportion of irrigated area ranges from about 6 per cent (Assam) to 46 per cent (Manipur)
- Low use of fertilizers varying from 2 kg/ha in Arunachal Pradesh to 63 kg/ha in Tripura
- Weak institutional credit delivery system (per hectare credit disbursement is one-fifth of the national average)
- Negligible agro-processing and post-harvest management
- Poor transport and market infrastructure (road density 168-490 km/1000 sq.km. with exception of Assam, Nagaland and Tripura)
- Poor monitoring and accountability of public service delivery system

Untapped Potentialities

- Inspite of above binding constraints, the NER has huge and unique potentialities too, such as:
- Rich natural resources, biodiversity and high dependable rainfall (annual rainfall about 2000 mm)
- Congenial climate for agriculture
- Social commitment to equitable and sustainable use of land resources such as *Jhum* practice

- High potential to increase agricultural productivity; average rice yield is 30 percent lower than the national average
- High potential for crop diversification towards horticultural crops
- Low use of agro-chemicals indicates considerable potential for "organic" agriculture

BRIEF DESCRIBTION OF DIFFERENT TRIBES UNDER STUDY ARUNACHAL PRADESH

APATANI

The Apatani tribes are found residing in the Ziro valley in the Lower Subansiri District of Arunachal Pradesh. They are said to have descended from a `legendary ancestor, Abotani. They have emigrated to Arunachal from the various region of north India that is situated in areas beyond Khru and Kime rivers. A number of Apatanis currently reside outside the valley. The members of the Apatani tribe have a very good physique and are medium to tall in height, matched with very fair complexion. They live in sturdy houses built of bamboo and timber. Their language belongs to the Sino-Tibetan family.

Society of Apatani Tribe

The members of the Apatani tribe can be divided into two classes, the Gyuchii and the Gyuttii. Apart from this they are divided into a number of clans. However the common belief is that all of these clans have got the status of having fallen under a single tribal identity. The Apatani society is highly patriarchal. Though the different clans maintain a cordial and harmonious relationship amongst themselves, inter class marriage is strictly

prohibited. Tribal `endogamy` and `clan exogamy` is the directive adopted by all the Apatani tribes. However, with the spread of education and modernity, there are seen instances of inter-caste marriage among the Apatanis. Monogamy as the societal norm is widely prevalent.

Economy of Apatani tribe

The Apatanis are agriculturists, producing mainly paddy. The Apatanis are good cultivators and practice both wet and terrace cultivation. Animal husbandry is another popular occupation of Apatani tribes. They rear 'Mithuns' cattle, pig, goats and poultry. They practice fishing by nets, angles and traps. Hunting with the help of spears, traps and arrows are practiced. While Apatani women weave nicely, men adapts to basket crafting. The Apatani businessmen establish links with different Apatani classes on grounds of affinity, ritualistic practices and friendship ties only.

TAGIN

Tagin Tribe is a member of the umbrella tribe of Tani. Having more than one partner at time is a routine amongst them. They are basically concentrated in the regions of Daporijo Upper Subansiri as well as some found in adjoining areas of West Siang. Their dress is quite simple consisting of only one piece of cloth mainly. They generally adhere to Donyi Polo. However two groups of this tribe - the Na and Mara have been influenced by Tibetan Buddhism. Si Donyi is one of the most important festivals of Tagins in which the sun and moon are worshipped. The 'Tagin-Moya' and 'Mayu' reside in the upper valley of Subansiri river and the

valleys of its tributaries. The 'Mara' and 'Na' sub-groups inhabit the Limeking and Taksing Circle.

GALO

The Galo tribes are mainly found in the Siang Frontier Division of the North-East Frontier of India. They are mainly concentrated in the west with the Subansiri River and extend upto the Sido River. Almost all the Galo villages are homogeneous in population. They occupy a larger area as compared to other tribes in the district. The language spoken by the Galo tribe confirms to the general characteristics of the Adi language which belongs to the Tibeto-Burman languages. Each group speaks different dialect which is characterised by some phonetic peculiarities. The Galo who reside in the foot hills speak Assamese language and Hindi language.

Occupation of Galo Tribe

The Galos are expert in making different kinds of baskets. Conical basket is a special item. It is strong and water proof. The basketry is associated with their cane and bamboo work that requires a great deal of knowledge and experience. The Galos are also good at weaving. Articles are prepared from the hides of domestic and wild animals. Out of this skin bags, pounches, sheaths are prepared.

Galos are expert in hunting big and small animals and birds. They perform hunting expedition to fulfill their needs. Hunting is more of relaxation and pastime than a regular economic activity. Agriculture is the main occupation for getting food. Land is cultivated through shifting cultivation. Shifting cultivation is a primitive type of agriculture. It requires a great deal of labour and hard work so a major portion of their time is devoted to the

agricultural activities. In this cultivation they grow paddy, maize, millet, chilly and sweet potatoes are grown. The yield is quite good and sometime they get bumper crops.

ADI

The Adi tribe constitute major group and inhabit the lower part of Lower Dibang Valley district of the state of Arunachal Pradesh especially Roing and Dambuk areas. The sub tribes forming this major group speak a common dialect, claim a common origin and also perform and celebrate same rituals and festivals. Adi tribe is mainly concentrated in the valleys of rivers. The fairs and festivals of the Adi tribe reflect their rich culture and heritage. Their main festivals are Solung, Etor and Aaran. The Adi tribes are very fond of dances. The Adis live on the high spurs of hills.

Food production is achieved by cultivation, hunting and fishing. They practice Jhum cultivation. Paddy, maize, millet is sown in the same field. The Adi tribes are known for their amiable and simple nature. The way they carry out the job of administering people, depict their democratic nature. They have nicely organised village council, better known as `Kebang`. The Adi tribe is organized into several clans. This tribe is determinant of the social relationship and kinship.

HILLS MIRI

Hill Miri Tribe has a similar social and economic life as to that of the Nishi tribe. Three names were given to them: the Panibotia, the Tarbotia and the Sarakdwar Miris. They have good relations with the people of plains of Assam. The women wear an attractive crinoline of cane rings'. This serves

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 59

the purpose of a blouse. They are fair complexioned tribes. Booriboot is their main festival. They are fond of dance and music. They have three to four hearths. Their head gear is more elaborate. They belong to the Mongoloid race. It is popularly called the Abotani tribe.

NISHI

The Nishing tribes are the largest groups of tribes scattered in the provinces of Lower Subansiri district. The Nishings are also known as Nishis. All Nishis trace their descent from legendary ancestor, Abotani and they are the basically inhabitants of the western half of the Lower Subansiri district of Arunachal Pradesh. They are well-built, fair in complexion and medium to tall in physical structure. They also possess good knowledge of business. Their houses are made of thatch, bamboo and timber. Nishi family is generally patriarchal and polygamy is practised. Nishing tribes have developed a special way of decking up themselves. No one fails to identify a Nishing due his or her special apparel. Usually, male Nishing keep their hair quite long and also tie the hair locks in a tight knot just above the forehead. The Nishing women are engaged in weaving whereas basketry is a popular handicraft among the men-folk of this tribal group.

Unlike most of the tribes of Indian Territory, the villages where the Nishing tribes live are sometimes found in groups. The Nishis are mainly agriculturists and they commonly practice shifting cultivation. It is also because of the lack of plenty of appropriate land for wet rice cultivation that the Nishing tribes are almost completely depending on `slash and burn

cultivation`, which is commonly known as `Jhum Cultivation`. Permanent cultivation is also being progressively adopted, where ever it is feasible.

MONPA

Monpa tribes constitutes of five percent of the total population of tribal communities throughout the whole Arunachal Pradesh. This Monpa tribe displays many common attributes. Monpa tribes are said to be one of the primitive tribes of Tawang District and West Kameng District. The people of Monpa tribal community are reckoned for their artistic creations that include beautiful Thangka painting, carpet making, weaving and wood carving. They are adept in making paper from sukso tree. Moreover, the people of this tribal community also practice shifting cultivation. Among their major crops, barley, rice, maize, chili, wheat, tobacco, pumpkin, beans, pepper, and indigo can be named. They also rear domestic animals like yaks, pigs, cows, fowl and ship.

MANIPUR

KUKI

Kuki Tribes of Manipur are an ethnic group which spread over the vast areas of North eastern regions of India, North western regions of Burma and the foot hills of Chittagong Hill tracts. It is one of the largest tribal communities which has spread all over North East India as well as the countries who share a common border with Indian States. The expansion of this group is largely due to the British policy in India which included many more tribal groups and called them the Kuki tribes. The Kuki tribes are distinctly marked for their lifestyle which includes their economic, political,

social and religious structure in the face of changing patterns of life and growing modern education, along with spread of Christianity and various other changes that has been initiated by the government for the upliftment of these tribal groups.

Culture of Kuki Tribes

Kuki Tribe of Manipur have distinct cultural trends which are reflected in the festivals they observe and the folklores, songs and music they play. As the society is largely agriculture based the festivals of the land is accordingly agro based. Among other festivals some of the most important festivals are the Lawm Se` Neh, Chavang kut, Mim kut, Sa- Ai, Chaang -Ai, Hun, Chang le Han, Kang kap.

HMAR

The Hmar tribes are a distinct community as far as their traditions, culture and social customs are concerned. They claim their origin from the Singlung which is located in central or south-west China. Belonging to the Chin-Kuki-Mizo group of tribes, Hmar tribes mostly reside in the southern area of Manipur, especially in the districts of Churachandpur and its neighbouring regions.

Economic Life of Hmar Tribe

The Hmars depend on forest products. Their economy can be classified dually -traditional and subsidiary occupations. Shifting cultivation is the main and traditional occupation and blacksmith, carpentry, poultry, basketry, priesthood, herbal med carpentry, are subsidiary occupation. They are backward economically. Paddy, maize, millet, chilli, potatoes, mash

melon, beans, cucumber, water melon are the main crops of shifting cultivation.

GANGTE

Gangte tribes are one of the tribes of Manipur who are scattered in different parts of southern part of Churachandpur District. This tribal community is a sub group of the Chin-Kuki-Mizo tribes. Primitive practices and rituals are some of the identifiable traits of Gangte society. It also enriches the culture of the Gangte family. This customary sacrifice, namely Vawkpithah, is compulsory and is used to be held at least once in every three years. Killing of animals like mithun, goats etc and also singing and dancing are an integral part of the Gangte festivals. Dances and musical forms of Gangte tribes are rich making them popular amongst other tribes of the region.

PAITE

The Paites are considered as the old Kuki group. The word Paite also has got etymological significance. If one dissects Paite in to two terms, 'pai' stands for marching, while 'te' means people. As a whole, Paite means 'a group of people marching.' Besides Manipur the Paite tribes also inhabit Mizoram. They speak Paite language which belongs to the Tibeto Bur man family of Kuki Chin group. They are advanced socially, politically, economically and educationally. The Paites dresses are similar to the Lushai people. Women dress in a more colourful manner in comparison to the men. The Paites vary from short to medium height and their skin colour differs from dark brown to light yellow. Dance, songs, tales, all linked to every day chores of the life of these Paite tribes, thus ennobling the tradition and

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 63

culture of Paite community. Zangtalam is a popular dance style performed by this community. Both Paite males and females folks actively take part in it. By nature the Paite tribes are timid, recluse people who are truly committed to whatever they do. Although the Paite tribes are mainly agriculturists, many of them have achieved remarkable fetes.

VAIPHEI

Vaiphei Tribe inhabits the Churachandpur district in Manipur. The Vaipheis are one of the Chin-Kuki-Mizo-Zomi-Hmar tribes and they strongly believe that their ancestors emerged out of Khul, Khur, Sinlung or Chhinlung group. The Vaiphei tribes have their own set of cultural and social traditions. The society is patriarchal and patronymic in nature. The kinship structure is of classification type and one kinship term is used for different categories of relatives. The tribal community is further divided into clans and sub-clans. Though inter clan marriages take place but the clan is primarily endogamous by nature. Agriculture is the main occupation of Vaiphei tribal community. It is practiced through both shifting and wet cultivation. The social custom of "Tawmngaihna" and "Kihutuana" refer to the services provided in times of dire need. The essence of these customs is that they induce a sense of solidarity in the tribal community.

Culture of Vaiphei Tribe

The culture of Vaiphei Tribe includes a number of customs. One such custom is the welcome ceremony of an unborn baby. The ceremony is known as Naoyuneck when the pregnant mother is around seven or eight months due. The birth ceremony of a child is held on the seventh day after

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 64

he or she is born. The father of the child organises a feast for the villagers. Both young boys and girls pierce their ears with a tough hair of porcupine and black and red thread. A number of festivals are also celebrated by the Vaiphei tribe.

POUMAI

The Poumai Naga is a community predominantly inhabiting the Senapati District of Manipur, though there are villages that fall in the Nagaland state, situated in the northeastern part of India. Poumai villages are strategically perched on hill tops or ridges for security reasons as tribal warfare was very frequent in those days. Stockades and fortified trenches were constructed around the villages to defend and thwart surprise attacks by enemies. Generally, due to Head-Hunting practice, Poumai traditional villages are strategically located on the hills. Houses are usually built in rows facing each other. Each house with a garden in the backyard, grows vegetables, fruits, sugarcane, bamboos, etc. At the turn of the century, with modernity yet to make its entry, men's dress was very simple. It consisted of a kilt and a cloth. Most of the time they remained half-naked except on grand occasions. During festivals, they wore Roh-lai (diadem), Vee-hoxzü (a colourful bird's feather), Phao-hah, paongi (ivory bangles), etc. Women wore Lakiteisha (a black shawl with red and green stripes), Poüpumü (a white-skirt with black and green stripes), Bao-sa (bangles), Baoda (a brass bangle), and Toutah or Tou (necklaces). The grills could also be woven from the barks of nettle.

MAO

The Maos are one of the major tribes constituting the Nagas, a group of tribes spread over the eastern most part of India. The Maos inhabit the northern part of Manipur State of India. The Maos are also known as Memei or Ememei, in their own language. The term 'Mao' also refers to the area where most of the old and original villages are situated, as distinguished from the newer settlements in an expanded area of their habitation. George van Driem put the Mao language as one of the Angami-Pochuri languages, classified as an independent branch of the Tibeto-Burman languages. Although classification differs in most other accounts, it is considered as one of the languages forming the Naga group within Kuki-Chin-Naga genus of the Tibeto-Burman subfamily of the Sino-Tibetan family. It displays a lot of variations in tonality, spelling and pronunciation among the Mao villages, suggesting a lack of interaction in the past. Many of the physical and metaphysical objects are referred to by different names by different villages. The degree of variation gets considerably widened with the neighbouring dialect groups such as the Poumai and the Angami, although the Maos can inter-communicate fully with many of the villages in the Poumai group and to a certain extent in the Angami group.

KOM

Kom tribe is one of the important tribal communities of northeastern states, mainly found in the Senapati and Churachandpur districts of Manipur. These Kom tribes share the same language of other tribes like Aimol, Koireng, Chiru. They share a close affinity with the Hmar tribes. The Koms

are farmers, practicing mainly shifting and wet cultivation. Rice is the staple food. Kom tribes domesticate several animals like pigs, fowls, goats, cows, buffaloes, mithun etc. The artistic acumen of these Kom tribes is clearly reflected in the houses, art works etc. The culture thus gets enriched in this way. Literacy rate among the people is high and they are very active in political activities of the state. For better administration, their society is segregated into social groups, which further gets divided into smaller groups. The Clan is the biggest social group. Various Kom clans include Thingpui, Karong, Saiche, Leivon, Tellein, Hmangte, Serto and Lupheng. Festivals, both of social and religious nature, are an integral part of culture of Kom. Song and dance are part and parcel of the festivals of Kom. During Lamkut, at dusk song and dance (Lamkut lam) are held in every house. Feasts, merrymaking also follow afterwards.

KABUI

Kabui Tribes or popularly called the Rongmei live in the Tamenglong district of Manipur. Some of the Rongmei reside in Imphal valley, the capital city of Manipur. They are patrilineal and patriarchal. The ancestral home of the Kabui tribe lies in the mountain ranges in the Tamenglong sub division of Manipur. The Kabui settlement in Manipur happens to be the southern portion of the vast tract of Kabui country. As far as race and language is concerned the Kabui fall under the Tibeto-Burman family of the Mongolian race. The Kabui tribes have been considered as one of the twenty nine tribes in the Constitution of India. Their language is Kabui. Agriculture is their main occupation. Rice is the main crop that is grown.

Other vegetables are also grown. They also work as daily wage labourers. They are also engaged into occasional hunting too. Fishing is another occupation of this tribe. Weaving is an occupation among the women.

MEGHALAYA

KHASI

The Khasi tribes live in Khasi and Jaintia hill districts of Meghalaya and its northern slope up to Brahmaputra valley and the southern slope rolling to the Surma valley. The Khasis have old and rich oral tradition which reveals a hidden truth of their past. English is their second language. As their society is matriarchal all the earning of males and females are owned jointly and administered by the head woman. Property is inherited from mother to daughter. Khasi family life is woven into religious rituals and ceremonies. In some cases it has seen that women act as religious and secular chiefs. It is interesting to note a typical Khasi house. It is a shell-shaped building with three rooms: the shynghup is a porch for storage; the nengpei is the center room for cooking and sitting; and the rumpei is the inner room for sleeping. Khasis celebrate many festivals with the help of ritualistic dance performances. Dance and music form an integral part of Khasi Life - every festival and ceremony.

JAINTIA

Jaintia tribe - a sub tribe of 'Khasi', are the inhabitants of Meghalaya. They have been residing in Jaintia hills and belong to the Proto Australoid Monkhmer race. Jaintias are also known as Syntengs and Pnars. Their kingdom was the oldest one and widely spread over the hilly areas of the

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 68

Jaintia Hills District. The origin of the Jaintia kingdom is unknown. Jaintia people are rich in their cultural heritage. Their culture reflects the traditions, music, dances, art and crafts of Jaintia tribe. The tribe is famous for artistic weaving, wood-carving and cane and bamboo work. These are also the main crafts of the tribe. They are also famous for weaving of carpet and silk and the making of musical instruments, jewelry and pineapple fiber articles. This tribe is matrilineal in character and the youngest daughter inherits the familial property. The two most important festivals celebrated by the Jaintias are the Behdiengkhlam festival and Laho Dance festival.

GARO

Garo tribes prefer to be called A'chik or Mande. The Garos regard themselves as the descendants of a common ancestress. The Garos are of the Mongoloid stock. A matrilocal and matrilineal society is prevalent among the Garo tribes. Jhum cultivation is the main occupation of the Garo tribe during harvest. The economic life of the Garo tribes revolves around agriculture and farming. The hills in this region are suitable only for Jhum cultivation. Paddy, cotton, maize, millet, pulses are grown. The Garo people are very fond of music and dance.

MIZORAM

MIZO

Tribes of Mizoram primarily reside within the small clans which have turned out to be small villages that have a separate house for its village head. The social life of the mizos largely depends on a un translated code of ethics which defines the duty of every mizo towards his society. The people

Micro Communication in Hill Ecosystem of India: THE Agro-ecology and Livelihood ISBN: 978-93-85822-06-3 69

of Mizoram usually celebrate a number of festivals which are part and parcel of the tribes of Mizoram. Besides celebrating all the national festivals, few local festivals are being feted in great exuberance. Chapchar Kut, Pawl Kut are the harvesting festivals. The most popular dances forms of these tribes of Mizoram are Cheraw, a bamboo dance, Khuallam, a dance for visitors or guests; Chheih Lam is feted at the end of a day-to-day work. Other dance forms like Solakar or Sarlamkai are performed by few tribes of Mizoram state. Tribe of Mizoram primarily depends on farming which forms the baser of their economy. This largely depends on the harvesting period which decides the type of crops. Along with farming the State of Mizoram has showed some variation in case of Education.

NAGALAND

AO

The real home of the Ao Naga tribes are the catchments of the five ranges in Mokokchung District of Nagaland lying between the river Dikhu on east and the plains of Assam on the west. Monogamy is the common form of marriage amongst them. Marriage between the blood relatives of family group is strictly prohibited. The Ao women are infamous for their permissiveness. The Ao Nagas have different morals unlike their neighbor clans. Their economy is dependent on agriculture. People are increasingly taking up the terrace cultivation. The Ao area is suitable for the development of animal husbandry, dairy forming, horticulture and forestry. The Ao Nagas are rich in their folk literature. Their folk literature reflects the background of the people, their mind, character, religion, culture,

superstitions and taboos. There are numerous legends and folk-tales about the origin of the people of Nagaland and other hill areas of North-East India.

ANGAMI

The Angami Naga Tribes are found in the Jotsoma village of Kohima district. According to the Angamis, their native place was Myanmar. Their ancestors migrated from Myanmar to Nagaland in Mao village. Thereafter, they advanced to Kohima district and were divided into three groups and migrated to different places of Nagaland. The Angamis belong to the mongoloid race. They speak their own language though they do not have a script of their own. Angamis are agriculturists. Shifting or Jhum cultivation is practiced among this tribe. Animal husbandry has also become one of the basic occupations. They follow traditional economy and depend upon land forests. They live in concentrated groups and their society structure is rural in character. The agricultural products are produced collectively. Besides this they engage themselves in weaving, black smithy and other handicrafts to meet their daily requirement during off season. Weaving is a developed traditional household industry. Women are the expert and skill weavers. The Angamis are skilled in handicrafts like bamboo works, cane works, wood works and pottery and so on. Dance and songs are an essential part of the Angami tribes. On every religious and social occasion, the villagers gather together to sing and dance.

LOTHA

Lotha is the name of a major Naga tribe inhabiting the Wokha district of Nagaland, India. *Wokha* is the traditional home of the Lotha tribe. Lothas are renowned for their colorful dances and folk songs. The male members wear shawls indicating their social status. The prestigious social shawl for women is Opvuram and Longpensu for men. Like many Nagas, the Lothas practiced headhunting in the older days. But, after the arrival of Christianity, they gave up this practice. Tokhu Emong and Pikhuchak are the main festivals celebrated amidst much pomp and splendor.

SEMA

Sema Naga tribes or Sumi Naga Tribes are of Mongoloid origin and are the inhabitants of upper region of Assam. They are primarily the inhabitants of Zunheboto District of Nagaland. The word "Sema" originates from `Sumi`. This martial race has a political system of an autocratic secular character, having a chieftain being characterized by benevolent disposition. Semas are generous, hospitable and frequently improvident. The main occupation of the Sema Naga tribe of Margherita sub division under Tinsukia District is cultivation and weaving. The Sema Naga Tribe celebrates many festivals, which have been carried down from generations. Most of these festivals usually mark the beginning of new seasons, harvesting of new crops or victory at war. The two major festivals that are currently popular among them are Ahuna and Tuluni

RENGMA

Rengma Tribes live in a rectangular strip of land between the Angami on the south, the Semas on the east and the Lothas on the north. They call themselves by the names of Njong or Injang. The Rengma tribes are recognised, acknowledged and identified by their district culture, customs and traditions. They belong to the Mongoloid racial stock. The Rengma is a patriarchal society therefore the line of descent is traced through the male side and property rights goes to the male line. The Rengma tribes are agriculturists. They grow paddy through Jhum cultivation and wet cultivation. Besides paddy staple crops, seasonal crops and fruits are also grown. Rengma Tribes celebrate lot of seasonal festivals that are related to their agriculture. Ngada is the most important festival of Rengma tribes. It is celebrated after harvesting the crop or at the end of November or in the beginning of December.

PHOM

Phom is a Naga tribe from Nagaland, India. Their traditional territory lies between the territories of Konyak in the north-east, the Ao in the west and the Chang in the south. Yongnyah is the largest Phom village. Agriculture is the traditional occupation of the Phoms, and the tribe practices jhum cultivation. The Phoms also have a tradition of pottery, bamboo work and spinning. After the advent of Christianity, many modern Phoms have adopted contemporary clothing, though traditional dress is worn during festivals. The traditional Phom dressing was indicative of the social status

of the wearer. The Phoms have 4 major festivals, the most important of which is Monyu. The others are Moha, Bongvum and Paangmo.

CHAKHESANG

Chakhesang is a Naga tribe found in Nagaland, India. Chakhesangs are the former Eastern Angami, who have separated from the Angami Naga tribe, and are now recognized as a separate tribe. It is a major tribe in Nagaland. Most of the villages of this tribes falls under the Phek District and Pfutsero, Chozuba sub-division of Nagaland. The tribe is basically divided into two groups known as "Chokri" and "Khezha". Originally chakhesang consisted of three major sub-tribe, namely "chokri", "khezha" and "sangtam", from where the word chakhesang came from, taking the first syllable of each tribe namely "cha" from "chokri", "khezha" and "sang" from "sangtam". Now chakhesang consist of two major group "chokri" and "khezha" and one minor group "zhamai" or "zhavame", who belong to Poumai Naga tribe living predominantly in Manipur. The chakhesang tribes are mainly found in the phek district of Nagaland.