

# Participatory Development Communication: A Strategy in Climate Change Adaptation in Southeast Asia

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**Abstract**— Climate change is a global apprehension impacting the lives of millions from all spheres of the world. Most hard-hit are the less-developed nations whose livelihood depend much on agriculture with low-level technology, poor information system, and weak grassroots institutions. This is now a significant point for Development Communication to facilitate positive engagement in the most vulnerable areas through systematic design and use of other communication platforms in sharing knowledge and information among stakeholders, especially in agro-ecological settings. By using secondary research method, this paper provides an overview of the theoretical approaches of Development Communication and Participatory Development Communication that are generally responsive to actual or expected effects of climate change. Further, it sought to analyze the approaches of Participatory Development Communication to determine a communication strategy for climate change adaptation in agricultural Southeast Asian nations. Finally, a participatory communication model was designed and recommended not as a panacea to this pressing natural and man-induced phenomenon, but as a safety net for sustainable rural-agricultural development.

**Keywords**— *Development Communication, climate change, climate change adaptation, sustainable development.*

## I. INTRODUCTION

Climate change is one of the scariest phenomena in the world today. It is a global apprehension impacting the lives of millions from all spheres of the world especially on people who live in less-developed nations that are highly exposed to hazardous climate change and who have limited adaptive capacity. Research on the South-east Asian farmers' perceptions of climate change supports the circumstance by revealing that one of the important dimensions of climate change that is poorly understood by the farmers is climate change adaptation [1]. Therefore, it is vital to develop effective adaptation strategies by involving the farming communities to secure livelihoods and community development as most largely depend on agriculture with a low level of technology, poor information system and weak rural knowledge institutions. In the Southeast Asian region, especially in disadvantaged areas, agriculture is the nucleus of any development and subsistence-oriented farming is the basis for food. Although a shift from subsistence-farming to intermediate farming and to market-oriented commercial farming is visible in the rural farming system, the incessant peril of climate change has overtaken the situation.

Therefore, people living in this region have specific communication needs and capacities for innovation, management and finance.

The objectives of the article are: to provide an overview of the theoretical approaches to Development Communication (DevCom) and Participatory Development Communication (PDC) that are responsive to climate change; analyse the approaches to determine a communication strategy for climate change adaptation, and recommend a communication model, based on conceptual analysis, for climate change adaptation in agro-ecological context.

The article uses secondary research method that involves already existing data and literature. The data of the article were collected from research materials published in research papers and similar documents such as conference papers, workshop papers, and publications of international and national agencies.

Communication that follows DevCom strategies and methods plays a critical role in promoting effective and fruitful adaptation strategies by technological advancement, information system development and by strengthening rural knowledge institutions. PDC is viewed as a social process designed to bring together agricultural technicians and farmers and other stakeholders in a multiple flows of communication process where people are both senders and receivers of information and co-creators of knowledge. Hence, this strategy of communication might be a conduit to address the gap between and among research institutions, the providers of information and advisory services, and the farmers themselves in climate change adaptation.

## II. DISCUSSION

### A. An overview of the theoretical approaches to DevCom and PDC

#### Theoretical Approaches to DevCom

Development Communication is the confluence of two processes, development and communication. It is oftentimes puzzling which process is weightier than the other. Quebral [9] makes it clear that development could be regarded as weightier than communication. She further explains development being the progressive improvement of the quality of life that needs to happen. Communication is the vehicle that carries the development onwards; hence,

development is the ultimate goal, a constant intent of the development workers. In DevCom, communication theories are applied to achieve development goals in any given situation. Theories of communication are evolving to create new meaning while converging with development [7]. Thus, the approaches to development communication change according to various communication theories and models. These approaches take new shape as a result of insightful research and practice in the communication field. In climate change and agro-ecological context, the goal is to cope with the harsh environment with innovative agricultural practice and technology such as responding salinity problem in the rice field due to sea level rise by planting salt-tolerant rice varieties.

The following discussion on approaches to development communication is based on both the point of view of communication theory and development theory.

#### Top-down Approach to Development Communication

Top-down approach is dominated by the theories from unilinear communication. Evert Rogers is one of the pioneers in this approach. In his 'diffusion of innovations' theory, Rogers [10] states that the role of communication is to transfer technological innovations from development agencies to their clients and to create an appetite for change through raising a "climate for modernization" among the members of the public. Rogers is anchored to modernization perspective of development to explain the role of communication in this approach. In modernization, two sorts of deficits are identified by the scholars that slowed down the development in Third World countries. These are "cultural deficit" and "information deficit" that make these countries lack the necessary culture to move into a modern stage. Culture is viewed as the "bottleneck" that prevents the adaption of modern attitudes and behavior; thus, information is regarded as the instrument that would solve it. The notion is more of universal rather than particular. Philosophically, the reality is viewed as singular. Communication basically meant the transmission of information and exposure to mass media is one of the factors, among others (e.g. urbanization, literacy) that could bring about modern attitudes. This knowledge-transfer and top-down approach defined the field for years.

#### Participatory Approach to Development Communication

Modernization paradigm that promotes a top-down approach is criticized as a concept of development associated with a western vision of progress. After decades of interventions, the failure to address poverty and other structural problems in the Third World needed to be explained on the faulty theoretical premises of the programs. Therefore, a call for a new approach appeared in the context of development communication. According to the International Commission for the Study of Communication Problems (1980:254), this is a call for a new attitude in overcoming stereotyped thinking and to promote more understanding of diversity and plurality, with full respect for the dignity and equality of peoples living in different conditions and acting in different ways. The participatory approach stresses reciprocal collaboration throughout all levels of participation. Listening to what the other says, respecting the counterpart's attitude, and having mutual trust are needed [11].

PDC is based on the notion that all the actors of development should act under the same umbrella in a given situation where everyone's opinion will be valued with admiration and self-esteem and action will be taken from mutual understanding. There are several branches of participatory communication available in the literature. Although labeled under different names, such as Communication for Development (ComDev), C4D, ICT4D, Development Support Communication (DSC), Behavioral Change Communication (BCC) and so on, the fundamental principle of these concepts are grounded on participatory communication. In recent literature, several other concepts are found in the perspective of climate change adaptation. One of the concepts described by the Food and Agriculture Organization (FAO) is Community Based Adaptation (CBA). After careful observation, it is found that the concept of CBA goes hand in hand with Rural Communication Services (RCS), a participatory development communication approach in the context of rural development and climate change adaptation. Hassan [7] stated that the concept of RCS is presently being steered in the context of FAO-supported projects to promote network-like institutional arrangements that allow the integration of demand-driven communication services to satisfy knowledge and information needs of the rural population, while ensuring their active participation in development initiatives.

#### The Concept of Rural Communication Services

Over the past few years, RCS has evolved as an alternative co-learning and engagement platform serving rural development processes. As defined in *Farming for the Future: Communication Efforts to Advance Family Farming* [3], RCS is a "sustained two-way process" delivered regularly to the rural population that is intended to enhance rural livelihoods by facilitating equitable access to knowledge and information, social inclusion in decision-making and stronger links between rural institutions and local communities.

RCS is an interactive and participatory communication process to satisfy the demand for knowledge and information of rural population by using DevCom strategies, methods and tools in a collaborative manner where all the stakeholders are involved and share their resources. The ultimate goal is to support agricultural and rural development programs. It gives special attention to institutional strengthening and capacity development of the communication service providers and the communication service receivers.

#### RCS as an Approach to Development Communication

Quebral [9] redefines Development Communication as "science of human communication linked to the transitioning of communities from poverty in all its forms to a dynamic overall growth that fosters equity and the unfolding of individual human potential." The term "human communication" is used here in a general sense as human communication is fairly a vast area of study. According to that sensibleness, there is flexibility to use the appropriate communication method for development in any given situation.

Scholars and practitioners may differ in the wording they use to define the subject, but their intent is constant [11] i.e., development. All those involved in the analysis and application of communication for development and social

change can broadly be termed development communication. Consequently, RCS can also be labeled as a practical approach to DevCom as its ultimate goal is to support agricultural and rural development. RCS is directly linked with ComDev as the concept is defined and applied in FAO-supported projects.

#### RCS as an Approach to Participatory Communication

RCS is a Participatory Development Communication approach as it applies communication strategies from ComDev. It could be marked as a hybrid concept of communication in rural development and climate change adaptation. RCS borrows theories from more than one communication model. Theoretically, it underpins with theories derived both from the transactional and the systems model of communication. That's why RCS is participatory and systematic that has multiple flows of communication. It is a system of knowledge, information, and communication services appropriated to serve the rural population's need concerning rural agricultural development and climate change adaptation. Participants are varied, who represent various sectors/stakeholders. Problems and needs analysis is not solely focused on beneficiaries' behavior, but looks at the whole system including support systems. It focuses more on how these services, though coming from different organizations, were put together and made accessible to the intended population. It also looked into the blend of modalities by which the services were made accessible to the rural people.

The basic elements of RCS and Participatory Development Communication are identical. RCS is biased towards participatory communication. It focuses on two main areas of application: 1) information dissemination and motivation and, 2) training of field workers and rural producers. Both areas assume as essential conditions of participatory audience involvement. If knowledge and technologies are not shared effectively, the full potential of development cannot be realized. Like PDC, the major elements of RCS include interactive communication, Network-like Integration, Demand-Driven Communication Services, Collaboration, Active Participation, Stakeholder Dialogue, Convergence of Different Media, Empowerment of Local Stakeholders, Local Content and Community Media. □

#### *B. Conceptual analysis of approaches to determine a communication strategy for climate change adaptation*

Climate change adaptation refers to the action taken by individuals, communities or governments in response to climate change, to reduce the adverse impact or to take advantage of opportunities offered by such changes [5]. In DevCom, climate change adaptation denotes the communication strategies used by the agencies in response to climate change. In the previous discussion, the communication strategies and initiatives for climate change are several and varied.

Harvey [6] stated that most of the communication initiatives are northern-based and linear in style, delivering top-down information which is intended to inform people's decision-making. Hence, the communication approaches to climate change adaptation are predominantly supply-driven, focusing on sharing information rather than responding to the specific needs of communities. Transmission of information

alone cannot address the issue of adaptation. A research conducted by [1] showed that the majority of the farmers in the Southeast Asian region are aware of climate change. However, the study expressed the concern that adaptation was one of the dimensions that were poorly understood by the respondent farmers. Although the link between perceived changes and stated adaptations is weak, farmers are aware of the types of changes they need to make in response to climate change. The study suggested that adaptation responses must be firmly grounded not only on local conditions, but also on the views of participants at the front lines of climate change impacts.

Similarly, another research conducted by [7] in the coastal area of Bangladesh showed that the climate change adaptation rate is lower when the majority of farmers are aware about the rise of sea level and increase salinity in their crop field. The study also showed that the farmers did not practice all the recommendations when cultivating Salt Tolerant Rice Varieties (STRV). The respondents expressed that they already have the available information regarding climate change adaptation; however, they did not have enough money to provide input such as irrigation, fertilizer, and pesticide. Therefore, the dissemination of information only cannot bring about positive change in climate change adaptation. There is a need for collaboration among all the service providers including the farmers' organizations, research institute, academe, extension services, NGOs and financial organizations in the rural areas. Moreover, there should be an available strategy to build the capacity of the farmers so that they can demand the appropriate services from the service providers. Intergovernmental Panel on Climate Change-IPCC [8] stated that effective climate change adaptation cannot be achieved if each agent acts independently. There is a need for collective action to address climate change issues. Hence, participatory communication approaches can produce more effective results in climate change adaptation.

FAO [4] stated that documented experiences and lessons in the field indicate that community-based adaptation (CBA), a participatory approach, yields far more encouraging results than the top-down approach in climate change adaptation in an agro-ecological zone affected by global warming. It focuses on empowering communities to use their own knowledge and decision-making processes to take action on climate change by involving multi-stakeholder action, innovation and social learning that make use of small-scale, low-cost, simple technologies or whatever resources local communities have.

As stated above, RCS is an identical concept of CBA that uses participatory communication approach in response to climate change and other issues in rural areas by focusing on local customization and negotiation of rural development initiatives, coordination and better use of limited resources, connecting geographically- dispersed agricultural service providers and users, collaboration and linkage among stakeholders, providing platform for discussion and enabling interactive communication, rapid data process and management, informed and collective decision making, right information in right time and place and enhance the impact of existing agricultural information and advisory services. FAO [3] conducted its first research initiative aimed to compile existing evaluation cases of RCS with proven methodologies to assess and document evidence-based



approaches in the field of DevCom that might be used for designing rural communication services as part of agricultural and rural development policies especially in response to climate change adaptation. A total of 19 cases of RCS from Africa, Asia-Pacific (including the Southeast Asian nations), Latin America and Caribbean were evaluated. To determine whether or not project activities were contributory to the outputs, outcomes and impacts, all 19 rural Communication initiatives were evaluated. The overarching focus of this study was to document ways of generating convincing evidence of the contribution of communication towards sustainable rural development, with the aim to influencing policymakers to invest in rural communication services and the required human resources. Of the 19 cases reviewed, RCS had contributed to the improved capacities of their intended or primary stakeholders in most cases. Therefore, RCS is a recent well-established Participatory Development Communication approach that could be applied in Southeast Asia in response to climate change adaptation.

RCS and participatory communication are intertwined. It is the guiding force to connect all the participants the key link between farmers, extension, and research, for planning and implementing consensus-based development initiatives [2]. In RCS and climate change perspectives, participatory communication is a social process which starts with farmers and brings them together with technicians in a two-way sharing of information as communication equals. It highlights cultural identity, concerted action and dialogue, local knowledge and stakeholder participation at all levels: international, local and individual.

It has become evident that the systematic use of participatory approaches and ICT applications in RCS is strategic in coping with climate change by assessing people's knowledge, perspectives and expectations; building on existing communication systems; ensuring equitable access; promoting local content; using realistic technologies; ensuring financial sustainability, and building on local capacities. Special attention should also be given to the development and validation of appropriate communication strategies such as RCS to climate change at the field level.

### C. Recommended communication model, base on conceptual analysis, for climate change adaptation in the agro-ecological context

The communication model is developed based on the features of RCS, field level research on RCS and practices of RCS in different countries. It promotes collaboration of stakeholders, capacity building, empowerment of farmers, integration of media, best utilization of resources and local knowledge. The success factors of RCS are: policies enabling effective communication between research, advisory services, and farmer's organizations in rural areas; Service providers are skilled in communication and have a positive attitude to communicate with clients; Systematic learning from experiences in Communication approaches; Representative farmers' organizations as partners in communication; Use of participatory methods for the active involvement of all partners in communication and Integration of a media-mix to achieve the desired communication objectives.

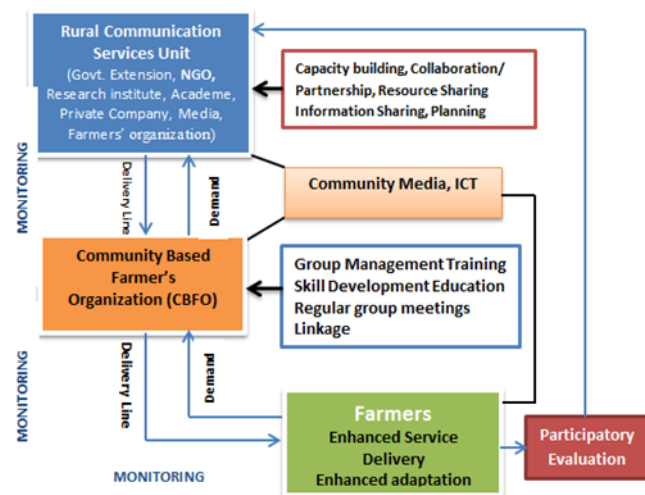


Fig 01: Participatory Communication Model for Climate Change Adaptation

The study conducted by [7] on climate change adaptation and RCS revealed that there are several factors involved in the delivery and adaptation of climate change-resilient agricultural technology among the farmers. A majority are small farmers with low-level education. They are mostly scattered and not organized and there is almost no representation of farmers in the RCS system that makes them unable to demand the services they need. It is also found that there is no association between the types of communication services and the mode of adaptation. It could be explained by the gap between the demand and delivery of the communication services. Not all the RCS delivery variables have an association with the mode of adaption except NGO as a service provider. It is further explained that NGOs follow group approach and the effectiveness of that approach is validated by the result that shows the association between group meeting and the mode of adaptation. This means that NGO/CSO as RCS provider and using meetings would tend to enhance the total adaption of recommended technologies. Based on the social networking analysis, the government extension agents and NGOs are the center of information sources. In order to develop the model, all the above findings have been considered.

It is important; however, to emphasize that the RCS delivery system can only be effective if it matches the demand side of the farmers. Hence, farmers must be capacitated to be more organized and vigilant in creating the demand. In turn, the RCS should appropriately design its delivery system/processes to match the demand side. For only when RCS is demand-driven would it be able to maintain and sustain itself.

Group approach and group meetings showed a strong association with the mode of adaptation. Therefore, regular group meetings are suggested in the communication model. The farmers could be met every week/every month to discuss their problems and their needs. The role of the extension agent would be to facilitate the group while the farmers themselves would do the situation analysis. After the identification of problems and needs, it is now the turn of the extension agent to provide what is needed – technology and technical knowledge.

The outcomes of the meetings would be considered as the feedback/demands/needs of the farmers. Those demands

would be communicated to the RCS unit. The RCS providers could deliver the services according to the needs of the farmers. On the other hand, the farmers who are involved in the process could also disseminate the knowledge and skills to the other farmers. The limited manpower and resources of RCS providers found in the result of this study could be overcome by utilizing the groups.

Monitoring of communication activities between the demand and delivery line is suggested to keep the activities on expected track. Yearly evaluation is also suggested so that the lessons learned from the communication activities could be fed to the planning cycle. Farmers' representatives would also be involved as communication partners in monitoring and evaluation.

### III. CONCLUSION

It is evident that the transmission of information alone cannot address the issue of adaptation. Adaptation responses must be firmly grounded not only on local conditions, but also on the views of participants at the front lines of climate change impacts. There is a need for collaboration among all the service providers. There should also be available strategy to build the capacity of the farmers so that they can demand the appropriate services from the service providers. Participatory communication approaches can produce more effective results in climate change adaptation as it focuses on empowering communities to use their own knowledge and decision-making processes to take action on climate change by involving multi-stakeholder action, innovation and social learning that make use of small-scale, low-cost and simple technologies or resources available in local communities.

RCS is an identical concept of CBA that uses participatory communication approach in response to climate change and other issues in rural areas by focusing on local customization and negotiation of rural development initiatives, coordination and better use of limited resources, connecting geographically-dispersed agricultural service providers and users, collaboration and linkage among stakeholders, providing platform for discussion and enabling interactive communication, rapid data process and management, informed and collective decision making, right information at the right time and place and enhance the impact of existing agricultural information and advisory services. Research on RCS assessment by compiling cases from Asia, Africa, Latin America and Caribbean revealed that RCS had contributed to the improved capacities of intended or primary stakeholders in most cases. Therefore, RCS is a recent well-established Participatory Development

Communication approach that could be applied in Southeast Asia in response to climate change adaptation.

A participatory communication model is developed based on the features of RCS, field level research on RCS and practices of RCS in different countries. The recommended communication model can enhance climate change adaptation.

### REFERENCES

- [1] O. B. Abidoye, P. Kurukulasuriya, and R. Mendelsohn, South-East Asian Farmer Perceptions of Climate Change. The Economics of Climate Change Adaptation in South-East Asian Agriculture. Climate Change Economics in South-East Asian Agriculture Vol. 08, .N0.03, 1740006 (2017)
- [2] G. Coldevin, Participatory communication: a key to rural learning systems. Food and Agriculture Organization of the United Nations. Rome, Italy, 2003.
- [3] FAO, Inclusive Rural Communication Services - Building Evidence, Informing Policy. The Food and Agriculture Organization of The United Nations, Rome, Italy and The University Of Queensland, Australia, 2017.
- [4] FAO, Workshop report. Advancing Adaptation through Communication for Development. Proceedings of the technical session on Communication. Third International Workshop on Community-Based Adaptation to Climate Change. February 2009 Dhaka, Bangladesh. Retrieved from <http://www.fao.org/3/i1553e/i1553e00.pdf>
- [5] H. A. Francisco, Adaptation to Climate Change: Needs and Opportunities in Southeast Asia. ASEAN Economic Bulletin. Vol. 25, No. 1. The Environment, Climate Change, and Natural Resources in Southeast Asia: Issues and Challenges, pp. 7-19 (April 2008).
- [6] B. Harvey, J. Ensor, L. Carlile, B. Garside, Z. Patterson, L.O. Naess, Climate change communication and social learning-Review and strategy development for CCAFS. CCAFS Working Paper No. 22. CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS), Copenhagen, Denmark (2012).
- [7] M.K. Hassan, C.S.Torres, S.B. Jamias, M. T. H. Velasco, and M.C. Ocampo, Rural Communication Services in the Delivery and Adoption of Saline-Tolerant Rice Variety among Farmers in Amtali, Barguna District, Bangladesh. The Philippine Journal of Development Communication, Volume 8, (January – December 2016). p. 53-79
- [8] IPCC, "Social, Economic, and Ethical Concepts and Methods, Executive Summary" (PDF), Climate Change 2014: Mitigation of Climate Change, in IPCC AR5 WG3 (2014), p. 211
- [9] N.C. Quebral, Development Communication Primer. Southbound Sdn. Bhd, Northam House, 55 Jalan Sultan Ahmad Shah 10050 Penang, Malaysia (2012). p. 3-4
- [10] E.M. Rogers, Communication Technology: The New Media in Society. New York: Free Press (1986).
- [11] J. Servaes, Communication for Development and Social Change. UNESCO and Sage Publications India Pvt. Ltd (2008).