# ROLE OF COMMUNICATION IN CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT

**Dr. Y Prabhanjan Yadav**

Public Information Officer, Planning Commission, Govt. of India, New Delhi, India

Email**:** dr.prabhanjan.yadav@gmail.com

**&**

**Rapaka Jhansi Rani**

Ph.D Research Scholar & Project Manager (Health) with an NGO, Hyderabad, India

Email**:** jhansirani.rapaka@yahoo.com

*Abstract: Climate Change debates are no longer privilege of a few today these issues make headlines in print and electronic media. Global warming and climate change are the hot and prioritized topics in the global mass media. Both the Governments and the people depend on Communication and Mass Media not only for disseminating information, but also in setting agenda for the development and other allied activities. Hence, communication media become powerful tool for disseminating information and diffusion of innovations. Due to depletion of natural resources and burning of fossil fuels there is a great threat to environment. It is high time to save the depleting natural resources and discourage the irrational usage of natural resources by focusing on Sustainable Development.*

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*climatic chaos. Sustainable Development is attained by protecting the environment in a judicious use of natural resources. Countries both the rich and the poor have an equal stake in this stewardship of the earth. The very survival of our planet depends upon it. In this regard media plays a pivotal role in creating awareness and bringing the positive behavioral change among people in mitigating the anthropogenic climate change. Hence, the role of Communication and Mass Media is immense in climate change and sustainable development.*

**Introduction**

Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions or the distribution of events around the average (example more of fewer extreme weather events). Climate change may be limited to a specific region or may occur across the globe.

Climate Change debates are no longer privilege of a few today these issues make headlines in print and electronic media. Global warming and climate change are the hot and prioritized topics in the global mass media. Both the Governments and the people depend on Communication and Mass Media not only for disseminating information, but also in setting agenda for the development and other allied activities. Hence, communication media become powerful tool for disseminating information and diffusion of innovations. Due to depletion of natural resources and burning of fossil fuels there is a great threat to environment. It is high time to save the depleting natural resources and discourage the irrational usage of natural resources by focusing on Sustainable Development.

**Climate Change and Mass Media**

Media can focus on factors that cause environmental problems as well as adverse impact on people. The environmental problems, which threaten the present day existence as well as the future of humanity, are brought to peoples notice by the media. Some of these

issues are really quiet alarming and need to be focused upon, so that people can be made aware of their intensity. Straight reports, discussions, photo features and articles by experts help in informing the people about different aspects of climate change issue. The layman may not be able to assess the impact of many of the environmental problems persisting around them. The effect of the depletion of ozone layer and its long term effect on global warming, poses threat of melting ice caps in the polar region. The inducing rise in sea level and extinction of all species of living beings on earth cannot be comprehended in full measure by everybody. If media attempts to educate the masses on such vital issues, at least, the intelligent and right-thinking people will become aware about the need to take the precautionary measures and they get sensitized towards the natural resource conservation and protection.

**Enlightening the Masses**

Media acts as a catalyst in enlightening the masses on issues related to climate change. A few issues, on which global media reporting widely are global warming, green peace movement, depletion of ozone layer, climate change, green house gases effect, acid rain etc. Most of these problems are caused by the random destruction of nature and its resources, created by the irresponsible lifestyle of human beings. At the national level, a section of the media has drawn our attention on several environmental issues like Ganga River Action Plan, Chipko Movement, Narmada Bachavo Andolan and Appiko Movement. The waves of these movements were kept alive mainly by the coverage in various media. Of course, there are quite a good number of regional issues at the regional level covered by vernacular media.

Climate change is potentially catastrophic but whether it can be mitigated quickly enough involves tough questions. Media programs are effective means for changing longstanding behaviors or techniques in rural and urban communities. Media is working to bring about sustainable change at  individual level too. But rural, illiterate and poor communities in India do not have access or limited access to television, internet, newspapers and

magazines. Community radio provides an inexpensive and readily accessible to illiterate masses and the people live in far flung and remote areas.

**How should media practice self-restraint?**

Reducing the losses of life and property caused by disasters is a compelling objective which is receiving worldwide attention. We can save lives and reduce human suffering, dislocation, and economic losses by disseminating better information, communication and awareness. Timely communication about impending disasters can lead to appropriate individual and community action and attention towards mitigating strategies, which is the key to implementing effective prevention strategies including evacuation and survival of people. So, an environmental journalist must be trained and imparted skills, crafts and professionalism to be self-restraint and to accurately and intelligibly to report on environmental challenges. Such communicators educate, warn, inform, and empower people to take steps to protect themselves from natural hazards.

**Role and Responsibility of Media**

These days, the world is not a safe as disaster can strike at any moment. Reducing the losses of life and property caused by disasters is a compelling objective now receiving worldwide attention. It is now being increasingly believed that the knowledge and technology base potentially applicable to the mitigation of disasters has grown so dramatically that it would be possible, through a concerted cooperative international effort, to save many lives and reduce human suffering, dislocation, disaster shock and economic losses simply by  providing better information, communication and awareness. In disaster, media should show its preparedness, emergency management and critical infrastructure protection long before a disaster actually strikes.

Now media-print, audio, video and web have accustomed to the modern behavior and needs. The journalists should have a total commitment and involvement and work for the betterment of the society. Media professionals should consider this situation in all importance and social accountability in the larger interest of preserving not only the age

old traditions, culture and values of the land, but also protect the environment and ecology in the changing scenario of climate and strive for the sustainable development.

Responsible journalism requires providing socially useful contributions that deepen understanding of problems and encourage search for workable solutions. Media is to benefit the public. Social responsibility is the only criterion to distinguish journalism from blogging, disinformation or agenda-driven information. Of all the difficult problems facing humankind, climate change is the most open-ended and with the widest impact on everyone and everywhere. Media has an important role and a vital responsibility in providing accurate information to the public during a disaster.

In addition to official emergency broadcasts, media relay accounts for: What Happened? Where it happened? When it happened? Who or what was affected? Who are the more vulnerable? What is being done? Where it is safe to go? Areas to avoid (unsafe, or being worked on), When it is safe to go back? Where people can get help? Where to get more information on administration help or official help? Where is the rehabilitation centers located? The main principle of information provision, therefore, should be an ethical one: and so, during an emergency, media should be sensitive to the needs of the public in affected areas and should avoid misinformation and broadcast unconfirmed reports that may lead to despair and panic. Therefore, correct and reliable information disseminated through the media is an important instrument for balancing the possible effects of incorrect, misleading or even willfully distorted information.

**Objectivity**

Objectivity is an ideal, but not a new concept for media. Media should maintain neutrality and a balanced approach. This should be reported in a way that it highlights only the facts, that does not ignite further pathetic situations, but at the same time bring out the grievances of the people about the inadequate measures taken by the Government during the disasters. Importance of reporting accurate, fair and correct news is now overpowered

by the self-seeking domination in the media industry. The journalists should be virtuous and courteous in covering the disasters and natural calamities.

**Media Ethics**

Media ethics is important because the media is free to serve its purpose for the public, as opposed to special interest groups or advertisers. Reliable and timely information provided through the media can help the people to overcome any kind of fear and fatalism during and after an emergency. Indeed, the availability of reliable and timely information and knowledge about an event and the resulting needs help to improve solidarity and also create an atmosphere conducive to collective response for sharing the humanitarian challenges created by disasters. Media Ethics, therefore, become an important aspect of media reporting during any disaster event.

**Disaster Reporting**

Media informs the manifestations of disaster, taking place in the affected areas. Media reports and alerts both the people and the governments. Journalists must deal with climate change and its impacts on various socio-economic conditions with sensitivity, intelligence and accuracy. They require a healthy dose of skepticism and a strong stomach for intrigues. But news analysts and commentators need much more. Journalists should make it inheriting to report disaster risk management without any failure. They should gear up to focus on activities in reporting to educate people and authorities for prevention, mitigation, adaptation and rehabilitation due to disasters. In this competitive world, media is prioritizing to sensationalize the news, but it is rather remarkable to sensitize the public about understanding the disasters. Disaster reporting can be divided into four phases as given below:

 a.  **Non Disaster Phase**

During this phase the journalist works for the following:

- Publicizing the measures taken by the government to help the hazard prone areas and communities as part of disaster risk management.

- Reporting on the issues related to policy and legislation of disasters.
- Conducting interviews and highlighting the strategies for disaster mitigation.
- Enhancing the understanding capacity of the masses by presenting the detailed analysis of the outcome of the disaster.

## b. Pre-disaster Phase

In this phase journalists:

- Educate the people by reporting the dangers and the risks of different hazards and safety measures to be adopted by the population living in the danger zones.
- Create awareness and inform public scientific forecasts of early warning.
- Identify the gaps in preparedness measures being taken up by the governments and reporting
- Address the gaps during pre-disaster phase.
- Sensitize the public about the spread of communicable diseases and preventive measures to be laid if a disaster is prone to occur.

## c. During disaster Phase

The journalists, during disaster, work as a bridge between the affected communities and relief organizations by addressing on the key issues. The possible actions taken by a reporter during a disaster are:

- Informing the relief organizations by highlighting the needs of all the disaster affected.
- Reporting on the pathetic situation of the survivors and requesting for the help and aid is a prerequisite.
- Relaying and broadcasting news on the welfare of the people or the families who are isolated and trapped in certain areas (roof, trees, uplands or island etc) and draw the attention of the authorities to take up immediate rescue operations.
- Disseminating the information on what government and aid groups have done to save the lives and property of the affected people. Further plans, actions and measures formulated by the authorities to save lives and provide essential assistance to the affected people.

## d. Post Disaster Phase

In the final phase, the Journalists estimate the physical and economic damage caused by disaster and present a clear picture on the overall situation. The following are the responsible steps taken by the reporter in post disaster phase.

- Collecting information and reporting the casualties and survivors in hospitals and reporting from relief camps and highlighting the minimum requirements for survival.
- Reporting on the coordination of government authorities, NGO's and civil societies in the disaster prove areas.
- To address the concern of survivors a reporter makes arrangements for debates in order to develop and implement plans with active participation of stake holders.
- The Government may not have enough funds to respond and reconstruct during aftermath of a disaster. In these circumstances the media appeals to the donor agencies globally for mobilization of financial, technical, infrastructure and food and clothing material resources.

**Media and Disaster Communication**

Media has certain characteristics that make them powerful instrument of disaster communication as they provide quick and easy access to large number of people located at different places. They highlight the problems and difficulties faced by the people affected by disasters. Media mobilizes public opinion for relief and rehabilitation assistance. Access to information is crucial for the effective management of disasters. All those who are concerned with managing disasters necessarily have the need to access timely and accurate information.

**During Pre-Disaster**

Media alerts the people about the possibility of occurring disaster and the precautionary measures to be taken. Before disaster hits, emergency management officials hit the airwaves to broadcast the message of impending danger and a specific action plan on how public can stay safe. Instances such as tsunami, fire and flood typically have warning

signs, allowing officials hours and possibly days to prepare beforehand. Officials hold media conferences whenever they receive updated information about the disaster. Emergency management officials update the public on the current situation and give specific directions on how the public can prepare. Special disaster preparedness news broadcasts air during prime television viewing time in an effort to reach the masses. Some news coverage is interactive and allows the public to call the station and ask questions on air. Producers often invite disaster management professionals to answer on-air questions and present special information to help the public prepare for the situation.

**During Disaster**

When a disaster strikes, the public must be informed on what to do throughout the disaster to stay safe. If the public has no prior warning, coverage during the disaster is critical. For example, during tsunami which occurred in 2004, news media provided 24-hour coverage on what people should do where to go and who to call if they thought their family members or well known persons were victims. Media also provided updates on search and recovery efforts and tracked the government's efforts to respond to the situation.

In other instances, television during disaster may not assist people immediately affected due to power outages. During disaster, nearly every household in affected areas lose power and television reception. In these cases, radio broadcasting helps to keep others informed about the storm's progress, track and possible damage. Reporters often stand out in the middle of the storm to report on the effects, which can help the viewing public assess the severity. Amateur radio operators can use hundreds of frequencies and can quickly establish networks tying disparate agencies together to enhance interoperability.

**During Post-Disaster**

Post-disaster coverage is vital to keep the public informed of potential safety hazards and business closings. Schools and offices in the affected area closed immediately following

a disaster. Local television news stations broadcast which facilities are closed, so that residents can make alternate plans. News programs also cover which areas are destroyed or are dangerous. Emergency management officials will appear on TV to hold updates concerning service restoration. Television media coverage may continue as long as there is a threat to public safety.

**Communication Technologies and Media used in Disaster Management**

Communication is the only relief at times of disaster and hence the need for an efficient disaster management system becomes imperative in public places and even in business establishments and important commercial joints, where people move around in large numbers. Scientific and disaster mitigation organizations should seek to develop working relationships with media based on mutual trust and recognition of differing characteristics, goals, and needs. Regular, effective communication among these disparate groups, before, during, and after disaster "events" can greatly enhance those relationships. Identifying and communicating specific themes and messages, both through the mass media and in the other alternative forms of communication are necessary.

For the wide spread of disaster information, several communication methods and strategies are adopted by Government and Non-Governmental organizations. All the possible communication methods-traditional folk media and modern mass media, big and little media, print and electronic media, web and wires, vertical and horizontal, linguistic and non linguistic, oral and written communication are used optimum. Their potentialities are explored extensively to reach the messages not only in the affected area but also across the nations and continents. This acknowledgment goes to each and every means of communication, media and organizations that contribute their best.

**Print Media**

Print media is used to disseminate all the needed information. The beauty or practicality of print materials is that you can go back to it, refer to it, read ,review and study the

material at your own pace and convenient time. The print media focuses on the factors that cause environmental problems as well as the negative effects of them on people at large. The environmental problems that threaten the present day existence as well as the future of humanity are brought to every bodies notice by print media. Some of these issues are really quiet alarming and need to be focus upon so that people can be made aware of their significance. Straight reports, discussions, photo features and articles by experts help in informing the people about different aspects of each issue and its intensity. Print media can educate, warn, inform, and empower people to take practical steps to protect themselves from disasters. In addition to reaching communities that may be beyond the reach of mass media, the pamphlets, posters, and books appeal more directly to children and provide a more interactive and entertaining educational mechanism. Indeed, they may have an immense and ever lasting impact on the minds of the people.

However, during  disaster it becomes difficult to concentrate and comprehend sophisticated information.  Rescue material must be simple and summarized.  The best print media conducive to disaster information are pamphlets, brochure and small leaflets.


**Electronic Media**


Before, during and after disaster strikes, radio and television are extremely important communication tools to warn and assist the public. The officials use radio and television to communicate specific plans and procedures that end up saving lives and property. If disaster management officials have a warning of an impending disaster, they can broadcast special conferences days before the event to prepare the public. Officials also have an opportunity to communicate action plans before, during and after disaster to ensure public safety. The message has been formulated and disseminated specific disaster preparedness and prevention instructions through television and radio. The disaster management organizations and NGOs should create and air their own programming on cable television, public broadcasting stations, and satellite television to educate people on disasters.

**Inter-Personal Communication Channels**

Inter-Personal Communication is considered the most credible and personal medium among all the communication channels. Within this face to face communication there are many other Inter Personal Channels (IPC) categories which can be used to elicit people's participation and create an understanding about disasters. Most of the development sector programs which require mass mobilization and also changes in the social values require face to face communication using community-based approaches, home-visiting, involvement of opinion of leaders and community participation. During IPC use the following elements become part of the channel in easy transfer of message and its meaning. These are: language, body language, emotions; opinion leaders of the area who become harbinger of new knowledge for others; use of formal and informal networks like a meeting, group discussion and even rumor which channelize information to different members of the community.

The IPC Channels are of great value, since these enhance the credibility of source and provide immediate feedback and an opportunity for redresses of any misconception. It has been proved that representatives of the communities like Panchayat members, Block development officials and teachers can elicit cooperation of communities to participate in the disaster preparedness and other activities. Use of peer to peer interaction in establishing consistent and continuous communication has been widely recognized in changing behavior of people in disadvantageous settings, particularly in disaster management.

**Folk Media**

Traditional Folk Media is an effective means of communication in disaster management. It enhances the level of understanding and knowledge of the community on vulnerability and disaster risk reduction. Folk media is used to spread disaster preparedness messages. Folk media use local languages and dialects. Along with the familiarity of language, the gestures, music and rhythm also make folk media more acceptable among rural communities, who have low literacy, limited exposure to other forms of communication

and face difficulties in understanding new concepts. Moreover, folk media allow for direct personal contact between the sender of the message and the receiver. Thus, personal contact and familiarity make the messages very credible and acceptable.

These indigenous communication channels are used in creating awareness among the people in disaster prone areas and motivating them to adopt the safe life styles. These folk art forms are also used to create awareness about climate change and disaster management. In India several groups used folk art forms as an effective communication channel in disaster preparedness. For instance, in Odissa, an NGO in Koraput District developed *Geetakudi*(songs) in a local tribal language to sensitize tribal communities on the importance of disaster preparedness.

**Ham /Amateur Radio**

In times of crisis and natural disasters, amateur radio is often used as a means of emergency communication when wire line, mobile phones and other conventional means of communications fail. Amateur radio is not as dependent on terrestrial facilities. It is dispersed throughout a community without "choke points" such as cellular telephone sites that can be overloaded. Amateur radio operators are experienced in improvising antennas and power sources and most equipment today can be powered by an automobile battery. Annual "Field Days" are held in many countries to practice these emergency improvisational skills. The operators use hundreds of frequencies and quickly establish networks tying disparate agencies together to enhance interoperability.

**Mobile Technology**

Mobile phones are the multimodal tool par excellence. In disaster management, SMS can be used to organize mass mobilizations, action alerts, precautionary and relief measures advocated by Government and Non-Governmental organizations. Current developments in the use of mobile phones include the enhanced ability of phones to create and transmit content other than SMS. High quality photo and video capability in the newest generation

of mobile phones has led to several software tools that allow people to publish photos, audio, and videos from mobilizations directly to disaster related websites. Bulk SMS are also being sent through mobiles.

**Web Based Technologies**

Web Based Technologies emerged as a very important tool for effective planning, communication, and training in the various stages of the disaster management. It provides a platform for people across the world to exchange ideas, knowledge and technology. It brings people together with common interests irrespective of geographical location. Usage of web in disaster management increases as it reaches out to every nook and corner of the world and more and more people become online. All the countries recognized the importance of developing an information infrastructure capable of sustaining state of art technology for use at the time of disasters. Furthermore, there is a move towards globalization of disaster networks to provide speedy assistance to every disaster victim, irrespective of the national boundary and geographical location.

With technology becoming more user-friendly, and cost-effective in India, Internet GIS is used for the management of disasters. It is used effectively in the event of any disaster for providing the first hand information about the extent of damage, the areas affected and to direct the rescue and relief operations. In India, the SWOT analysis (strengths, limitations, opportunities and the risks) is the Internet-based GIS for disaster management. Maps and spatial information are important components of the overall information in case of disaster event (flood, earthquake, cyclone, landslide, wildfire and famine). Hence mapping and spatial information acquisition becomes vital for disaster management effort. In general, GIS is used in any part of the disaster management cycle - disaster preparedness, response, recovery and mitigation.

**BOX-1**

**tv9 jeevanseva foundation flood relief activity in Kurnool district of Andhra**

In October 2009, the unprecedented floods in Kurnool district in Andhra Pradesh caused heavy damage. Kurnool was the worst affected and the towns were completely submerged under water. TV9 an electronic media channel besides the flood news coverage, took up humanitarian work by distributing more than one thousand food packets and also aided in rescue operations. People of Andhra Pradesh willingly came forward to donate cash, clothing, food supplies etc, to TV9. A whopping amount of Rs. 12 crores was collected through different efforts by TV9. It decided to construct houses for the homeless and entered into an MOU (Memorandum Of Understanding) with the Andhra Pradesh State Housing Corporation Ltd (APSHCL) on 24th February 2010 to build 750 Houses for the Flood victims at Panchalingala Village and constructed them successfully. On 26th Jan, 2011 Chief Minster inaugurated the houses.

**BOX-2**

**Tropical Cyclones in Bangladesh**

In November 1970, a tropical cyclone combined with a high tide struck southern Bangladesh, leaving more than 300,000 people dead and 1.3 million homeless. In May 1985, a comparably cyclone and storm surge hit the same area. This time, according to IDNDR Director Dr. Olavi Elo, there was better local dissemination of disaster warnings and the people were better prepared to respond to them. The loss of life, although still high, was 10,000 or about 3 percent of that of 1970. When a devastating cyclone struck the same area of Bangladesh in May 1994, fewer than 1000 people died. The dramatic difference, according to Mohammad Saeed-ur-Rehman, Director of the Bangladesh Disaster Preparedness Centre, was the introduction of new

Early warning system that allows radio stations to alert people in low-lying areas. Mr. Rehman maintained the 'media did wonderful work'. Researchers have noted the remarkably different impacts of the 1977 cyclone in Andhra Pradesh, India, which killed 10,000 people, and a similar storm in the same area 13 years later, which killed 910. In the later case, risk communication was effective.

**BOX -3**

**Deadly tsunami devastated Japan on 11<sup>th</sup> March, 2011.**

In Japan the tsunami happened on 11<sup>th</sup> March, 2011. It is indeed heartbreaking. This tsunami caused heavy and irreparable damage to people. Japan was the worst affected and the towns were completely submerged under water. All the media, particularly the electronic media exposed crystal clear the plight of the people of Japan. The people from other parts of the world also felt very sad and expressed their concern. The people from every corner of the globe felt that that was not the time to regret but that was the time to soften the hearts and help those who were in dire need of the help and prayers. Hence media could create empathy across the nations when deadly tsunami devastated Japan.

## Summary

Media plays a vital role in educating and enlightening the people and the governments to protect and preserve natural resources in the interests of future generations and the climatic chaos. Sustainable Development is attained by protecting the environment in a judicious use of natural resources. Countries both the rich and the poor have an equal stake in this stewardship of the earth. The very survival of our planet depends upon it. In this regard media plays a pivotal role in creating awareness and bringing the positive behavioral change among people in mitigating the anthropogenic climate change. Hence, the role and the responsibility of Communication and Mass Media are immense in Climate Change and Sustainable Development.

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