

Climate science communication in Pakistan: A compulsive need

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Science to policy communication is an important aspect of climate science due to the presence of uncertainty, varied viewpoints and complexities of the climate system. The manner in which climate scientists convey their research to politicians will determine how much of an impact their work has on a government's policies and actions about the effects of climate change. A lack of effective communication between scientists and policy-makers leads to ineffective policies, which ultimately exacerbate the damage caused by the impacts of climate change. This lack of communication is either a result of scientists' and researchers' limited ability to communicate their research to decision-makers - ultimately leading to their confusion about the uncertainties and complexity of the climate system - or is a result of policymakers' inability to communicate their priorities to researchers, which prevents them from conducting research that is focused on producing results. In such scenarios of communication gaps, the media is recognised as having the role of "intermediaries between researchers and decision-makers, representing the information into usable form" (Howlett, 2011). In recent years, to prevent climate change from developing into a crisis, there has been a noticeable increase in emphasising effective communication of climate change to policymakers. Every region of the world is being impacted by climate change, which is on the verge of becoming one of the largest disasters the world has ever seen. Unfortunately, Pakistan, which contributes less than 1% of global greenhouse gas (GHG) emissions, has been among the most vulnerable nations for past decades, according to the Germanwatch Climate Risk Index published yearly. The problem is that the effects are anticipated to worsen, increasing the vulnerability of the nation's livelihood and economy. Rehman, Adnan, & Ali (2018) reveal that Pakistan has experienced greater warming than the world as a whole, as measured by an increase in average temperature. Due to this increased warming, the Paris Agreement targets of 1.5°C and 2°C may appear earlier in Pakistan (Kiani et al., 2021). As a result of this temperature increase, climate and weather patterns alter in a variety of ways, resulting in unanticipated changes in precipitation, increases



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in the frequency and severity of extreme weather events, changes in the monsoon patterns, and an increase in heatwaves (Ali et al., 2019; 2020). These changes negatively impact people's livelihoods and well-being, as recurring floods, glacial lake outburst floods (GLOFs), droughts, and heatwaves of greater intensity affect many people every year, making the country one of the top ten vulnerable regions in the world. Recent floods in Pakistan are also attributed to unexpected precipitation during the monsoon season and increased glacier and snowmelt flow downstream. The main problem, however, is that while climate scientists and researchers are well aware of the underlying causes of such catastrophes, they are unable to convey this knowledge to decision-makers in order for them to devise policies that can help to minimise the loss caused by such climate change-induced events. Regarding this, the term "Science to Policy Communication" has gained prominence in many parts of the world; nevertheless, the phrase is less well-known in Pakistan. Realising the climate change adversity in the country and the communication gap between researchers and policymakers, a project was conducted under APN's Early Career Science Communicators programme. The project's primary goal was to communicate scientific research on climate change to various stakeholders. The project included various activities aimed at translating scientific research into understandable information and communicating it to the general public to raise awareness of the real-time challenges of climate change. Media has emerged as an essential means of communicating climate research to policymakers and the general public worldwide (Ahchong & Dodds, 1988; Aram, 2011; Boykoff, 2011; and Schäfer, 2012). However, media in developing countries such as Pakistan lacks the capacity to translate scientific information and connect it to everyday life, resulting in widespread neglect of the issue. Against this backdrop, a one-day media training workshop on "Climate Change with Emphasis on Health Impacts" was organised in collaboration with the Health Services Academy (HSA),

Islamabad, Pakistan. The workshop's primary goals were to provide training and capacity building for Pakistani journalists and media professionals to improve their efficacy of climate change communication and raise awareness among students and the general public. The media training workshop was attended by renowned media persons and journalists, climate scientists, members of the Health Services Academy, health professionals, and several students to acquire knowledge on the health impacts of climate change and effective climate change communication. The training workshop provided a forum for the media to interact with climate scientists and health professionals, and helped journalists and reporters understand the complexities of climate science and its associated uncertainties. During technical sessions, renowned journalists, including Farid Raees (Neo News), Khalid Jamil (Media Communications) and Hina Chaudhary (PTV news), working in the field of climate change communication, educated participants on the importance of science to policy communication and how to bring the issue of climate change to the forefront of media. Furthermore, they discussed the challenges associated with climate change communication in Pakistan. Climate scientists and health professionals also discussed the country's vulnerability to climate change and the consequences for human health. The representatives of the newly formed 'Environmental Journalists Association,' a group of journalists working on environmental and climate issues, also attended the workshop and invited other journalists to join them to call the media's attention towards climate change. The event was covered by one of Pakistan's leading news channels SAMAA TV and received remarkable appreciation from the participants. Such activities not only help to build capacity but also help to pave the way for cross-sectoral cooperation. The workshop also served to encourage students and researchers to play their part and participate in communication efforts.

In addition to the capacity building of media in effective climate change communication, public awareness of environmental issues is critical, as

they are the ones who face the consequences of the changing climate in their daily lives, such as heatwaves that cause illness and death, failing crops and flooded land. It is perceived that developing-country communities do not need to be convinced of climate change; rather, all they need is to ‘make sense’ of what they are witnessing, to understand it in the context of science, and to recognise future vulnerabilities and how to deal with them. In order to accomplish this, it is critical to effectively communicate to them their future vulnerability and potential solutions in an understandable manner. With this in mind, the project involved the use of multiple modes of communication to raise local community awareness, including dedicated radio programmes in the national language Urdu and TV interviews in the local language, i.e. Pashto. Through such non-scientific science communication, communities could better relate to and connect the information to their vulnerability and possible ways to cope.

Finally, given the formidable climate-induced challenges to society and the economy, climate change communication is a compelling necessity in countries such as Pakistan. Projects like the one described can contribute to enhancing the capacity of media to better communicate climate change while allowing researchers to get involved in science communication efforts. Regarding this, it is widely acknowledged that APN plays a remarkable role in leading regional efforts to support climate change communication projects. The persistence of such science communication efforts will eventually push the issue of climate change to the top of policy priorities, enabling more informed decision-making.

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