

## ***History of Climate Change from Below: A Vision for Future Research***

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December 30, 2014

Anthropogenic climate change is the most pressing global environmental issue of this century, one that was highlighted by the People's Climate March this September in New York City, the largest march ever on climate change. This huge march, as well as other demonstrations that were held across the globe from Paris to Papua New Guinea, clearly emphasized the fact that it is people, i.e. ordinary people, who are going to suffer from the impacts of climate change, and that something needs to be urgently done about it. For example, millions of small farmers around the world depend on seasonal bio-indicators (the annual rhythm of flowering, rainfall, etc.) for the planting and harvesting of their crops. However, due to climate change, these seasonal indicators have become erratic and unreliable, thus threatening the livelihood of small farmers. Therefore, even though humans are collectively responsible for climate change, neither the causes nor the consequences of climate change are equitable across the world.

When compared to the rich, it is the ordinary people, and in particular the poor, who suffer more and are more vulnerable to the impacts of climate change in the form of floods, droughts, and so on. Although there have been studies on the socio-economic dimensions of climate change, they are largely ahistorical in their focus and analysis.<sup>1</sup> This lack of historical analysis of climate change is surprising given that the term "climate change" includes the word "change," which means change over time.<sup>2</sup> Similarly, climate historians have largely dealt with natural climate change in the distant past, but not with contemporary climate change largely caused by human activities that the world has been witnessing over the past century.<sup>3</sup> In the process, these historians have neglected how climate change impacts the lives of ordinary people within societies. Even within an ecologically vulnerable ecosystem, it is the poor

who are most vulnerable to the impact of climate change.<sup>4</sup> Therefore, climate change and the history of climate change needs to be understood from the perspective of these people using a new approach: the history of climate change from below, or a people's history of climate change. This approach to doing history will focus on vulnerable sections of the society; that is, poor people living in places undergoing drastic climate change in the contemporary world.

People's history of climate change has five components. It starts with the ordinary people as they live and work in particular places, undergoing climatic (as well as economic and social) changes. For example, it could be the poor people living in Chicago, which is projected to face severe heat waves more often due to climate change. In the 1995 heat wave, for example, African Americans, many of whom are amongst the poorest of the city's citizens, had 50% higher mortality rates than the whites. Extreme heat combined with high humidity can be fatal for the old, frail, and lower-income people who do not have access to air-conditioning. The second component of people's history of climate change is climate change perception. This perception is often shaped by where people live and how they obtain their livelihood. These people may not use the term climate change, but they can certainly describe the climatic changes taking place in their immediate environment based on how it impacts their lives. For example, the Quechua speaking farmers in the central Andes region of Bolivia perceive climate change in terms of the decrease in frost nights because they grow potatoes that require alternative frost nights with days of intensive sunlight for processing into a freeze-dried product.<sup>5</sup>

People's history of climate change will examine the factors that ordinary people perceive as

responsible for and contributing to climate change and its impacts, which forms its third component. These factors could be industrialization, population growth, angry gods and so forth that ordinary people hold responsible for climate change over a substantial time period of fifty years. In addition, people's historians of climate change will investigate how the perception of climate change by ordinary people is influenced by local and national discourses about climate change.

The fourth component of people's history of climate change is the impact of climate change perception. As people interact with nature they develop a knowledge system that includes technologies, beliefs, and skills that enable them to maintain their livelihoods by using natural resources and interacting with the local environment in a more or less sustainable way. For example, Inuit hunters in the Canadian Arctic region have detailed sea ice knowledge along with a knowledge of the wind and current conditions which they can use to forecast ice safety, allowing them to travel in a particular direction so they can avoid dangerous conditions and hunt successfully. This Inuit climate knowledge is built upon previous experience with thin ice conditions, strong wind currents, etc., and is passed from one generation to another through stories, anecdotes, and so forth. People's history of climate change will study this knowledge and examine people's coping mechanisms and response to the impacts of climate change over time.

Interconnected with the above is the fifth component of people's history of climate change, which is the examination of ordinary people's response (including adaptation) to the impacts of climate change in their lives. This

could be in the form of adapting to climate change by spatially relocating their economic activities. For example, due to increasing temperatures in the lower altitudes over the last two decades, the apple farmers in the Indian Himalayas have moved to higher altitudes for apple cultivation. Ordinary people could respond to climate change by forming social-political organizations that would highlight the problems they face due to climate change. People living in areas facing drastic climate change can respond through rituals, etc., as their livelihood practices are deeply rooted in their culture and religion. For example, in Tanzania when the rains fail, people perform rituals to please the rain god.

Climate change is a deservedly "hot" topic these days in both the physical as well as social sciences. However, studies on the socio-economic dimensions of climate change are largely ahistorical, while historical studies on climate have focused on the distant past and have neglected the lives and views of ordinary people (in their geographical contexts) with regard to climate change. It is important to focus on the poor, and on ordinary people because they are most vulnerable to the impact of climate change, and this can be done through the people's history of climate change approach. By using this approach, social scientists would have a better and more in-depth understanding of local climatic concerns, and of how climate change actually impacts the lives of people over time and how they respond to these changes. This vision/approach to studying the socio-economic dimensions of climate change historically would help start a dialogue with ordinary people and help scholars, activists, and governmental and non-governmental organizations understand their ideas about climate change and its impacts, and to mitigate and/or adapt to them.

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<sup>1</sup> See Gita Laidler, "Inuit and scientific perspectives on the relationship between sea ice and climate: the ideal complement?" *Climatic Change* 78 (2006): 407-444

<sup>2</sup> There have been studies in climate history where historians have studied climate in relation to societies in the distant past when changes in climate were due to natural causes rather than human activities.

<sup>3</sup> The exception is Mark Carey, *In the Shadow of Melting Glaciers: Climate Change and Andean Society*. Cambridge: Oxford University Press, 2010.

<sup>4</sup> Donald Hughes, “Climate Change: A History of Environmental Knowledge,” *Capitalism Nature Socialism* vol. 21 no. 3 (September 2010): 80; Mark Carey, “Climate and history: a critical review of historical climatology and climate change historiography,” *Wiley Interdisciplinary Reviews—Climate Change* 3 no. 3 (2012): 233-249; Elizabeth Marino, and Jesse Ribbot. ‘Editorial,’ *Global Environmental Change* 22 (2012) 323–328.

<sup>5</sup> S.,Boillat, and F. Berkes. 2013. “Perception and interpretation of climate change among Quechua farmers of Bolivia: indigenous knowledge as a resource for adaptive capacity,” *Ecology and Society* 18(4): 21.