

# Chapter 3

## Local vs. Expert Perception of Climate Change: An Analysis of Fishers in Trinidad and Tobago

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### EXECUTIVE SUMMARY

*Local communities are known for having different and in some cases divergent perceptions of reality than experts. Particularly with respect to climate change, there is incongruence in the way that experts, namely scientists, view climate change and its effects and the way that this is perceived by laypersons, particularly those that are most impacted by climate change. But what are those differences and how exactly are these conceptualized? The purpose of this chapter is twofold. First, it examines the differences among three stakeholders (scientists, policy makers, and fishers) in their view of climate change and its impacts, using the case study of the fishing industry in Trinidad and Tobago. These views are mapped using the mental model approach and then compared in order to determine the best way to address climate change within a local setting. There is a clear difference in the way fishers in this study view climate change from the way local scientists view it. There is, however, some overlap between the perspective of the fishers and that of the policy maker. Moving from a position that all perspectives are equally important if there is to be a meaningful response to climate change, this chapter develops a set of procedures for mapping community perceptions of climate change on to those of scientists and*

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*policy makers. The second and ultimate objective is to look at the implication that the mental modeling approach has for diffusion, adoption, and technology transfer in response to climate change.*

## **ORGANIZATIONAL BACKGROUND**

The Intergovernmental Panel on Climate Change (IPCC) has indicated that there is a high probability that Small Island Developing States (SIDS) are the most vulnerable to climate change (IPCC, 2007; Smardon, 2006). Additionally, on the global level, studies have shown that there are concerns about climate change, particularly given the mission of sustainable development, which is to reduce vulnerabilities and improve quality of life (WCED, 1987). However when compared with other social and personal issues, the level of concern about climate change was lower (Bord et al., 1998; Brechin, 2003). Around the world, the level of knowledge regarding climate change and global warming reflects some confusion as to the exact causes of global warming. Several studies indicate this (Mertig & Dunlap, 1995; Bostrom, Granger Morgan, Fischhoff & Read, 1994; Kempton, Booster & Hartley, 1995; Bord, Fisher, & O'Connor, 1997; Bord et al., 1998; Plotnikoff, Wright & Karunamuni, 2004; Brechin, 2003). Further, there is a lack of understanding of the science related to climate change (Stermann, 2011; Weber & Stern, 2011). The low level of knowledge regarding climate change causes is also compounded by the fact that different stakeholders view climate change differently. These concerns are important to consider when addressing climate change with the viewpoint of sustainable development in mind.

Developing countries have been pushed to engage in diffusion, adoption and technology transfers of adaptation strategies (Tessa & Kurukulasuriya, 2010) to climate change as part of the mission of sustainable development. The notion of diffusion, adoption and technology transfer is centralist where there is an assumption that the local communities are not knowledgeable about how to address environmental threats and hence should receive the information from a particular body that has the know-how (Tessa & Kurukulasuriya, 2010; Driesen & Popp, 2010). For example, Tessa and Kurukulasuriya (2010) indicated that Article 4.5 of the United Nations Convention on Climate Change encourages the developed world to “promote, finance and facilitate the transfer of environmentally sound technologies and know-how to developing countries” (p.18). Here the assumption that the developed world and by extension that someone, in most cases the scientist has knowledge, is underscored. This knowledge is then passed on to someone else, in this case local populations in the developing world. But how can this type of exchange be effective particularly in the developing world where several constraints to adoption have been identified

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