

Governor Bobby Jindal  
P.O. Box 94004  
Baton Rouge, La 70804

January 15, 2010

Dear Governor Jindal,

This letter is being submitted by scientists who have worked on Louisiana's coast.

Trends in global climate change are a central factor affecting Louisiana's coast, and the challenges the state faces in ensuring its sustainability. As the Louisiana *Comprehensive Master Plan for a Sustainable Coast* states, the most recent report (2007) of the Intergovernmental Panel on Climate Change (IPCC) reinforces the multiple lines of evidence and observed trends that demonstrate the process of global warming currently underway.<sup>1</sup>

These trends, supported by data gathered from around the world, include the retreat of ice sheets and glaciers, observational temperature records, ocean heat content, and sea-level rise.<sup>2</sup>

Sea-levels are rising globally, due primarily to thermal expansion of the oceans and loss of land-based ice due to increased melting. The continuation of the current global rates of 3-4 mm/yr documented by satellite measurements would result in a rise of over a foot by 2100. However, several papers published subsequent to the IPCC 2007 Report have concluded that global average sea level is likely to rise at least two and potentially more than four feet this century.<sup>3</sup> This is because rapid melting of the large ice sheets in Greenland and Antarctica, the beginning of which is now being observed, is expected to contribute more to sea-level rise.

The IPCC points out that sea-level rise will not be uniform around the world.<sup>4</sup> Coastal Louisiana experiences one of the highest rates of relative sea-level rise, which combines the global rate with the effects of land subsidence. The relative change in water level at Grand Isle has been 9.24 mm/yr, based on monthly mean data from 1947-2006.<sup>5</sup> This is equivalent to a rise of three feet in 100 years, even before additional sea-level rise is factored in.

We believe that the scientific evidence is compelling that sea level is highly likely to rise at faster rates than in the recent past and that this poses severe threats to

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Louisiana’s people, land and coastal ecosystems. We also believe that substantial scientific evidence shows that healthy coastal wetlands are a necessary ingredient for a sustainable system able to respond to sea-level rise, and are thus a critical part of effective flood and storm protection.

The amount of sea-level rise that will be experienced depends on the future trajectory of societal greenhouse gas emissions.<sup>6</sup> These emissions are increasing atmospheric and oceanic temperatures, which are leading to concerns about stronger hurricanes, a key vulnerability for Louisiana.<sup>7</sup> It is therefore imperative that these factors be included in the development of policies on coastal protection and restoration, and that such integrated policies be strategically planned and urgently implemented.

Sincerely,  
(In alphabetical order)

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<sup>7</sup> IPCC 2007, WGI, Understanding and Attributing Climate Change, "Combining Evidence of Anthropogenic Climate Change,"

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