


# Adapting to the Present Day - A Good Substitute for Future Climate Change?

 The NAPSNet Policy Forum provides expert analysis of contemporary peace and security issues in Northeast Asia. As always, we invite your responses to this report and hope you will take the opportunity to participate in discussion of the analysis.

---



---

## Recommended Citation

Saleem Janjua, "Adapting to the Present Day - A Good Substitute for Future Climate Change?", NAPSNet Policy Forum, October 22, 2013, <https://nautilus.org/napsnet/napsnet-policy-forum/adapting-to-the-present-day-a-good-substitute-for-future-climate-change/>

---

by Saleem Janjua

October 22, 2013

---

---

## I. Introduction

Saleem Janjua argues that despite the substantial indecisiveness over climatic projections and their impacts, we should start adapting to the present day on the basis of recent changes in the climate. By adapting to present conditions and understanding them we may be able to offset future climate change impacts. Various bottom-up approaches (vulnerability assessment, risk assessment, resilience) could be very helpful in understanding the vulnerability of a country to current climate change and the rationales of adaptation in the local context.

[Saleem Janjua](#) is the editor of [AdaptNet](#) and a Nautilus Institute Associate.

The views expressed in this report do not necessarily reflect the official policy or position of the Nautilus Institute. Readers should note that Nautilus seeks a diversity of views and opinions on significant topics in order to identify common ground.

---

## II. Policy Forum by Saleem Janjua

### **Adapting to the Present Day - A Good Substitute for Future Climate Change?**

Palazzi, Hardenberg and Provenzale (2013) state that complex topography in Southeast Asia (including Pakistan) means that local variations in response to global warming, particularly precipitation, are likely to be large and many areas may vary from the regional trend. IPCC (2007) acknowledges that the lack of consistency between scientific models contributes to uncertainty in estimates of future climatic changes in this region. However, the scientific projections (IPCC, 2007; McSweeney et al., 2007) do indicate that Pakistan will experience rapid changes in climate, and would remain sternly impacted by the inevitable effects of climate change. Therefore, Pakistan should have a strong commitment in protecting itself from the wide-ranging adverse impacts of climate change.

The review of literature finds that, so far, only two comprehensive and noteworthy studies about climate change impacts, vulnerability and adaptation assessment for Pakistan have been carried out. First, CICERO (2000) report titled 'Developing Strategies for Climate Change: The UNEP Country Studies on Climate Change Impacts and Adaptations Assessment' summarizes four country studies (including Pakistan) that were undertaken as part of this report. On the basis of climate and socio-economic scenarios, Pakistan's study identifies potential impacts of climate change on different sectors. This report also suggests some adaptation measures necessary to adopt at the national level in Pakistan. Second noteworthy study is Pakistan's first ever 'National Policy on Climate Change' (MOCC, 2013) that Pakistan government has recently launched. This policy recommends some 120 steps the country could take to slow down the impacts of climate change on different Pakistani sectors such as; energy, transport and agriculture. Based on these reports as well as keeping in view of future climate change in Pakistan, a summary of the key predicted impacts of climate change and any anticipated vulnerability to these particular impacts for Pakistan has been briefly presented below. The summary could be considered as major concerns for Pakistan due to the changing climate:

*Pakistani cities with the highest population density will be the most vulnerable areas.*

*Pakistani residential sector will continue to show rising energy intensity trends.*

*The poor in Pakistan will be the most vulnerable due to their low adaptive capacity.*

*The stress on Pakistani water resources will increase due to population growth and urbanisation.*

*Extreme rainfall events that last a whole day, two days, and even three days, will increase.*

*Low-latitude regions of Pakistan will be vulnerable to climate change because of agricultural density and already high temperatures.*

*Crop-based agriculture will be severely constrained in Pakistan.*

*The monsoon governs the hydrological system of Pakistan. So, monsoon-dependent agriculture could remain the single largest economic activity of Pakistan.*

The above-mentioned both studies related to Pakistan have adopted the IPCC top-down scenario-based approach to provide information for understanding the potential impacts of climate change and the adaptation measures necessary to address them at the country level. These studies depend primarily on 'climate change' as well as 'socio-economic' scenarios as these are considered main drivers of the impacts, from which adaptation strategies for Pakistan have been devised. There is no doubts that the IPCC scenario-based approach has been widely used in the literature, and has also become gradually more refined with the addition of socio-economic, land use, and formal approach scenarios, improved depiction of uncertainties in climatic projections, and better spatial resolution through statistical or dynamical downscaling (Mahmouda et al., 2009; Dubrovsky et al., 2005; Arnell et al., 2004; Wilby et al., 2000). However, one could argue that the climate change studies (especially for the developing countries) adopting scenario-based approaches are still hardly (if any) able to provide sound information for decision-makers and policy-makers. Due to a number of limitations of the IPCC approach, many adaptation researchers even in the developed countries have changed their attention from 'scenarios, impacts, and adaptation strategies' (initial version of adaptation research) to adaptation to reduce 'vulnerability' and moving towards 'resilience' in planning and development context (new version of adaptation research). For these researchers (Moser, 2008; Nelson et al., 2007; Clark and Pulwarty, 2003; Tompkins and Adger, 2003; Burton et al., 2002; Barnett 2001), scenarios and likelihood of changes in climate are less important. Instead, methodologies for vulnerability and risk assessments, adaptive governance and resilience that enhance adaptive capacity (or coping capacity) are more favored. Such studies consider that despite the substantial indecisiveness over climatic projections and their impacts, we should start adapting to the present day (on the basis of recent changes in climate) as this could be understood a good substitute for future climate change. Hence, such bottom-up approaches (vulnerability assessment, risk assessment, resilience) could be very helpful to understand the vulnerability of Pakistan to current climate change and the rationale of adaptation in the local context.

In conclusion, the author suggests crafting a set of plans and incentives at the local level with participation and inputs from local actors themselves (bottom-up approach) for successful integration of adaptation into the local-level planning and development processes of Pakistan.

---

### **III. References**

Palazzi, E., Hardenberg, J. von., & Provenzale, A. (2013). Precipitation in the Hindu-Kush Karakoram Himalaya: Observations and future scenarios. *Journal of Geophysical Research Atmospheres*, 118

(1), 85-100.

IPCC. (2007). *Climate Change 2007: Impacts, Adaptation and Vulnerability - Summary for Policymakers*, Working Group II, Intergovernmental Panel on Climate Change (IPCC), Cambridge University Press, Cambridge, 1-22.

McSweeney, C., New, M., & Lizcano, G. (2007). *UNDP Climate Change Country Profiles: Pakistan*, UK: University of Oxford.

CICERO. (2000). *Developing Strategies for Climate Change: The UNEP Country Studies on Climate Change Impacts and Adaptation Assessment*, Report 2000:2, Center for International Climate and Environmental Research (CICERO), Oslo, Norway.

MOCC. (2013). Pakistan launches first national climate change policy, Ministry of Climate Change, Government of Pakistan.

Mahmouda, M., Liu, Y., Hartmann, H., Stewart, S., Wagener, T., Semmens, D., Stewart, R., Gupta, H., Dominguez, D., Dominguez, F., Hulse, D., Letcher, R., Rashleigh, B., Smith, C., Streetm, R., Ticehurst, J., Twery, M., Delden, H., Waldick, R., White, D., & Winter, L. (2009). A formal framework for scenario development in support of environmental decision-making. *Environmental Modelling & Software*, 24, 798-808.

Dubrovsky, M., Nemesova, I., & Kalvona, J. (2005). Uncertainties in climate change scenarios for the Czech Republic. *Climate Research*, 29, 139-156.

Arnell, N. W., Livermore, M. J. L., Kovats, S., Levy, P. E., Nicholls, R., Parry, M. L., & Gaffin, S. R. (2004). Climate and socio-economic scenarios for global-scale climate change impacts assessments: characterising the SRES storylines. *Global Environmental Change-Human and Policy Dimensions*, 14, 3-20.

Wilby, R. L., Hay, L. E., Gutowski, W. J., Arritt, R. W., Takle, E. S., Pan, Z. T., Leavesley, G. H., & Clark, M. P. (2000). Hydrological responses to dynamically and statistically downscaled climate model output. *Geophysical Research Letters*, 27, 1199-1202.

Moser, S. C. (2008). *Resilience in the Face of Global Environmental Change*. CARRI Research Report 2, USA: Community and Regional Resilience Initiative.

Nelson, D., Adger, W. N. & Brown, K. (2007). Resilience and adaptation to climate change: linkages and a new agenda. *Annual Review of Environment and Resources*, 32, 395-419.

Clark, M. P., & Pulwarty, R. S. (2003). Devising resilient responses to potential climate change impacts, *Ogmius: Newsletter of the Center for Science and Technology Policy Research*, 5, 2-3.

Tompkins, E. L., & Adger, W. N. (2003). *Building Resilience to Climate Change through Adaptive Management of Natural Resources*. Tyndall Centre Working Papers, 27, UK: Norwich.

Burton, I., Huq, S., Lim, B., Pilifosova, O., & Schipper, E. L. (2002). From impacts assessment to adaptation priorities: the shaping of adaptation policy. *Climate Policy*, 2, 145-159.

Barnett, J. (2001). Adapting to climate change in pacific island countries: the problem of uncertainty. *World Development*, 29, 977-993

---

## IV. NAUTILUS INVITES YOUR RESPONSES

The Nautilus Peace and Security Network invites your responses to this report. Please leave a comment below or send your response to: [nautilus@nautilus.org](mailto:nautilus@nautilus.org). Comments will only be posted if they include the author's name and affiliation.

---

View this online at: <https://nautilus.org/napsnet/napsnet-policy-forum/adapting-to-the-present-day-a-good-substitute-for-future-climate-change/>

Nautilus Institute

608 San Miguel Ave., Berkeley, CA 94707-1535 | Phone: (510) 423-0372 | Email:  
[nautilus@nautilus.org](mailto:nautilus@nautilus.org)