CLIMATE RISK AND CLIMATE CHANGE

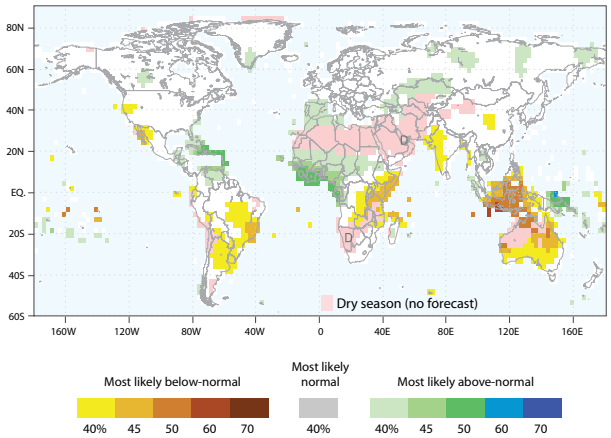
Scenarios of what the climate will be like 50 to 100 years from now have raised awareness and motivated actions toward reducing greenhouse-gas emissions. The risks associated with climate change demand these efforts continue. However, the long time horizons have led many decision makers to regard climate change as a problem of the distant future. But is it?

In many regions of the world, climate variability results in socioeconomic shocks and chronic constraints on development. The resources and attention spent on having to deal with the impacts of a variable climate can also mean a decreased ability to take advantage of those times when conditions are exceptionally good.

One predicted outcome of climate change is the occurrence of more frequent and damaging extreme events. The impacts are expected to disproportionately affect areas already faced with climate-sensitive development challenges, e.g. rapid and unplanned urbanization, land degradation, resource scarcity and epidemic stresses. As such, many of the problems associated with future climate change are already characterized by problems faced presently.

Climate information is available on a variety of time scales, from historical records to current observations to short and long term forecasts. Each of these can be beneficial to policy and decision makers. For example, longer time scales are especially important when considering investments and strategies that are expected to last well into the future–and must therefore take into account projected demands and conditions. This includes areas such as reservoir design, urban planning, transportation infrastructure, and development prioritization. But is climate information enough?

SAMPLE RAINFALL PROBABILITY FORECAST



Contact
Francesco Fiondella
francesco@iri.columbia.edu

International Research
Institute for Climate and Society
Columbia University
Lamont Campus
61 Route 9W
Palisades, NY 10964-8000 USA

Ph: +1.845.680.4476
Fx: +1.845.680.4866
www.iri.columbia.edu

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The Earth Institute

Climate-sensitive problems are by their nature complex, interconnected and time sensitive. Experience to date has made it clear that useful information can't be developed apart from an understanding of the target problem. Furthermore, the utility of additional scientific inputs requires consideration of available resources, practices, culture and the pathways through which decisions occur. Solutions are often limited by a lack of institutional coordination and by gaps in communication, information, education or knowledge management. The box below details ways in which these gaps can be bridged.

Learning to better manage year-to-year climate variability increases both a country's resilience and its adaptive capacity to the many risks associated with climate change. Societies that can assess current climate risks and create proactive risk-management strategies will be better equipped to confront developmental or environmental problems, since the challenges of the future will frequently be an extension and intensification of the challenges of the present.

Poor coordination, communication and knowledge management often limits the capacity to bring the best available solutions to bear on a problem, but these hindrances and be overcome by:

- Increasing the understanding of how decisions are made, and where climate information can help
- Developing climate information that is useful to the people responsible for making the decisions, while disentangling issues of shorter term variability from those of longer-term trends
- Creating opportunities to link institutions; to learn, educate, build capacity and share knowledge of 'best practice' guidelines for improved climate risk management.

About the IRI

The IRI works on the development and implementation of strategies to manage climate related risks and opportunities. Building on a multidisciplinary core of expertise, IRI partners with research institutions and local stakeholders to best understand needs, risks and possibilities. The IRI supports sustainable development by bringing the best science to bear on managing climate risks in sectors such as agriculture, food security, water resources, and health. By providing practical advancements that enable better management of climate related risks and opportunities in the present, we are creating solutions that will increase adaptability to long term climate change. IRI is a member of the Earth Institute at Columbia University.