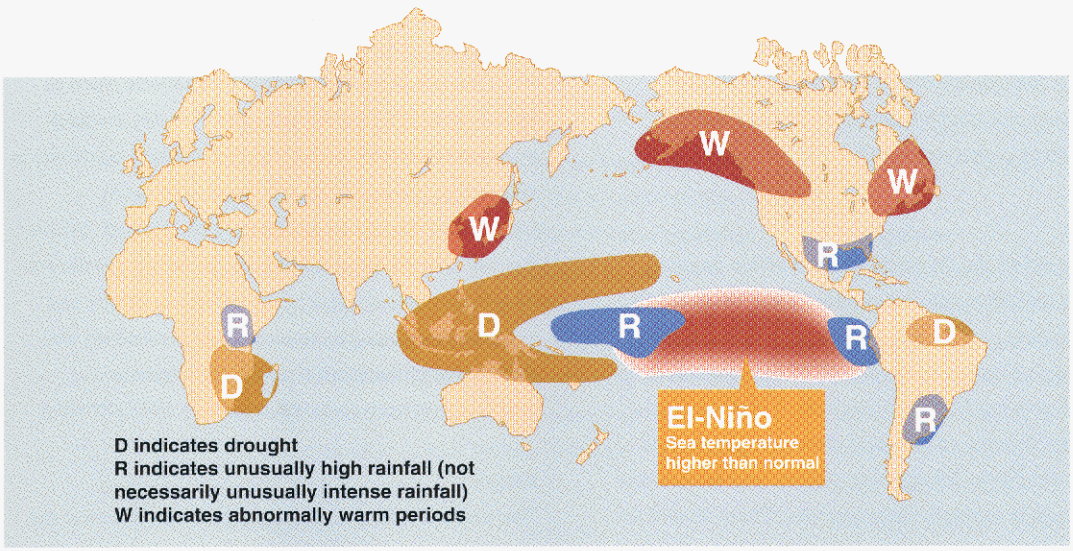
# Quick Summary of Lessons

*In response to the UN General Assembly's resolution on El Niño The WMO prepared a review of the science of the 1997–98 El Niño event. It was published in several languages by the WMO as The 1997–98 El Niño Event. A Scientific and Technical Retrospective The IDNDR (now the International Strategy for Disaster Reduction ISDR) was given the responsibility by the same UN General Assembly resolution to head an Interagency U N Task Force on El Niño As part of its activities for this project the ISDR identified lessons learned from coping with this event A few of the highlights (suggested lessons) from the WMO, the ISDR and from the country case studies are identified in the following paragraphs*

The 1997–98 El Niño event clearly demonstrated the useful and developing capabilities in the areas of climate monitoring and prediction, but the gaps in knowledge of the climate system, the gaps in monitoring coverage, and the early stage of development of climate forecasting models indicate the potential for significant improvement

- El Niño is inseparable from broader issues of climate variability and change This underscores the importance of a concerted effort on the part of governments and non-governmental organizations to continue research into climate variability, to improve forecast skill, and to develop appropriate policies for mitigating the impacts of climate extremes.
- Unless a concerted effort is made to prevent and mitigate the impacts, the extremes of climate variability will continue as a yoke of natural disasters burdening especially the developing world;
- The mitigation of the negative impacts of El Niño and other extremes of climate variability will require ongoing international support for the UN Climate Agenda
- International commitment is critical to the development and operation of a Global Climate Observing System.
- To be fully effective, impact assessment studies at the national and regional levels should be multidisciplinary;
- Policies for the mitigation of the impacts of climate extremes should be integrated into sustainable development strategies;
- Governments must ensure that the appropriate scientific and technical infrastructures are adequately supported, and secondly, they must ensure that information and prediction services are accessible to policy and decision makers for planning, early warning and better management across a range of sectors, including natural disaster reduction;
- Effective climate information and prediction services require an appropriate framework where users recognize what is possible to predict, where the providers recognize what is essential to be predicted, and where the scientific information flow is in a form that can be readily assimilated in decision-making;
- Improved dialog and cooperation are needed between the scientific and technological areas of the UN system and between the UN's operational agencies with responsibilities for disaster management humanitarian assistance, sustainable development, technical cooperation and capacity building.
- A crucial lesson of the IDNDR has been that effective disaster reduction strategies are possible and stand a better chance of being sustained if they are multidisciplinary in nature, and integrated within broader policy concepts pertaining to a society's economic growth and social development;
- A "Culture of Prevention" becomes even more important when applied to the consequences of recurrent phenomena such as ENSO events, that can have both varied and severe social and economic consequences;
- It is necessary to appreciate that societal conditions of potential vulnerability are dynamic, affected as they are by changes in demography, land use infrastructure development (or deterioration), etc. over time

## Specific Lessons from the Countries




Country responses to the forecast and impacts of the 1997–98 El Niño were evaluated for their strengths and weaknesses in order to identify ways to prepare for future events. Whether societies have learned from their recent experiences with El Niño will be tested during the next few El Niño episodes. The 1997–98 event served as a wake-up call to governments around the globe that El Niño can spawn adverse regional climate conditions that affect their society and economy in the short and long terms. Some of the key lessons learned in the 16 country case studies are presented here and are likely to apply to other countries as well.

### Bangladesh

There was a low level of awareness about El Niño/La Niña impacts in Bangladesh before the present study. This study has made clear that El Niño/La Niña has a strong influence on monsoon weather patterns. However, there is an urgent need for further study to better understand and forecast El Niño teleconnections in such monsoon-affected regions as Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand. As one of the most disaster-prone areas, Bangladesh must be integrated with existing international scientific and meteorological networks in order that it may better prepare itself with the benefit of forecasts, monitoring, and early warning.

### China

It is necessary to improve communications between the meteorological community (weather services, research institutes, universities) and the public in order to close the gap that exists between scientific research and its application to society and economy.

### Costa Rica

The level of detail of the El Niño forecast needs to be improved. During the most recent El Niño, the warnings were too generalized and therefore in some cases tended to mislead rather than inform. While correct in the forecast of a drought in Guancaste, cattle were moved to an area where no drought was forecast, but which later occurred, creating an intensified crisis.

### Cuba

Because each El Niño or La Niña event has some unique aspects that are not captured in its average description, surprises are to be expected in terms of societal and environmental impacts. There is no typical El Niño, and a better job has to be done to prepare all levels of society – the public, the media, educators and policy makers – for a range of events.

### Ecuador

Political, socio-economic and military problems will have to be dealt with by governments at the same time they are coping with an El Niño forecast or its impacts. In times of El Niño-related disasters, it is