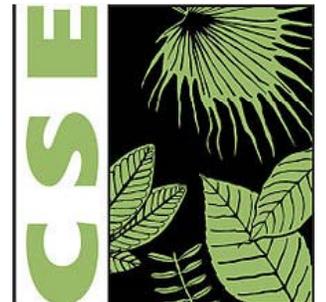
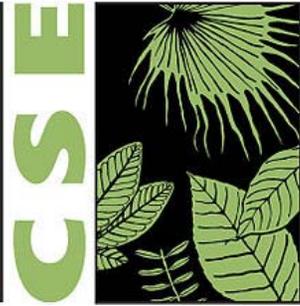


Loss and Damage due to Climate Change

Chandra Bhushan

Deputy Director General, CSE



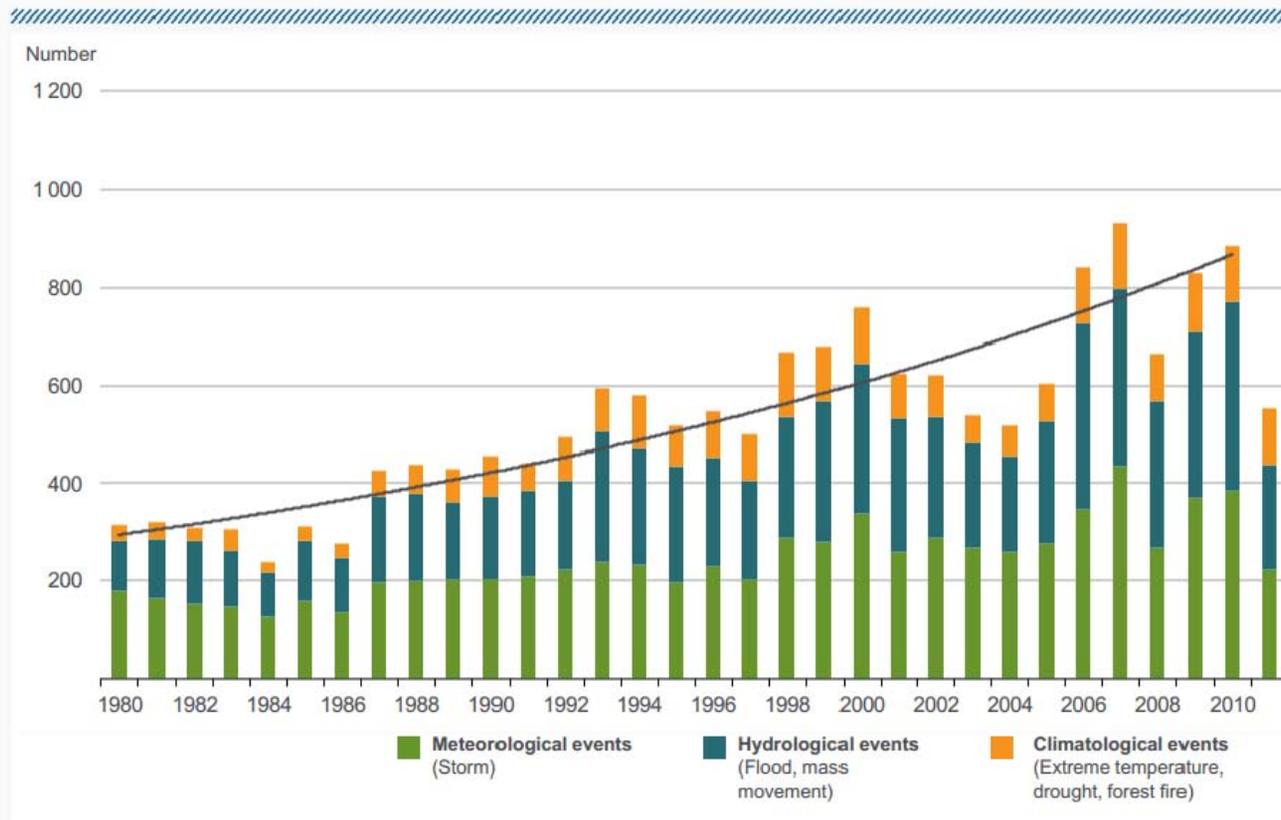


Extreme weather events – becoming the norm

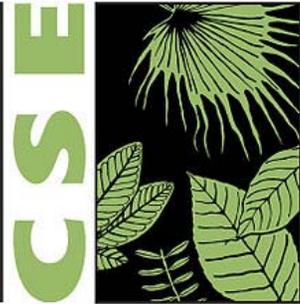
Extreme weather events

Number of weather catastrophes worldwide 1980–2011 (2011 Jan. to Sept.)

Munich RE

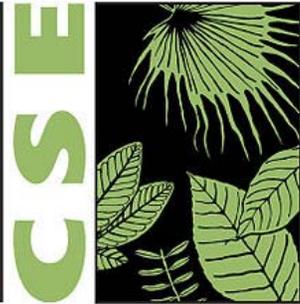


- Hurricane Sandy, only the most recent of a trend that shows an increase in extreme weather events
- Long list of such events for 2012 – Floods in northern Thailand, Cold snap in EU, Drought and fires in USA, worst drought in Brazil in 50 years
- Initial estimate of losses from Sandy alone – 50 billion USD



IPCC Special report on extreme weather events (SREX), 2012

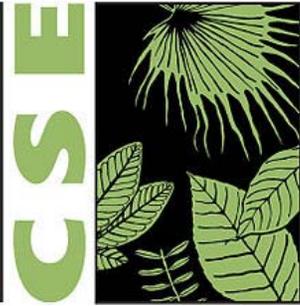
- Q: Are such events likely to increase?
- IPCC SREX:
 - very likely - overall decrease in the number of cold days and nights, overall increase in the number of warm days and nights
 - Medium confidence - warming trend in daily temperature extremes in much of Asia
 - medium confidence that the length or number of warm spells or heat waves has increased
 - Likely - heavy precipitation events in most regions increasing, not decreasing
 - Likely – number of cyclones will remain the same but intensity will increase
 - Most likely, droughts have intensified since 1950 and are prolonged, especially in western Africa and southern Europe



IPCC Special report on extreme weather events (SREX), 2012

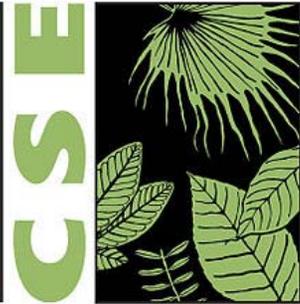
Q: Has there been an increasing trend in the estimated economic loss from such events?

- IPCC SREX: **Economic losses from weather- and climate-related disasters have increased.**
- Munich RE quantifies this loss: aggregate loss of weather-related catastrophes since 1980 is \$ 1600 billion
- Loss in terms of gross domestic product (GDP), between 2001 and 2006, for low income countries about 0.3 per cent; developed nations about 0.1 per cent of their GDP; and emerging economies like India and China, about one per cent of their GDP.



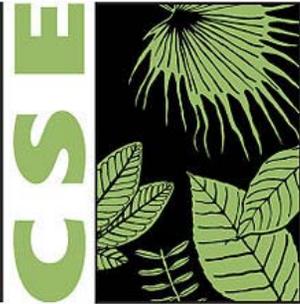
IPCC Special report on extreme weather events (SREX), 2012

- Q: Can these events be linked to climate change?
- Challenging to attribute the changing trends or occurrence of extreme events to climate change, probabilities are used to establish a causal link
- IPCC SREX:
 - *likely* that anthropogenic influences have led to warming of extreme daily minimum and maximum temperatures at the global scale.
 - *medium confidence* that anthropogenic influences have contributed to intensification of extreme precipitation at the global scale



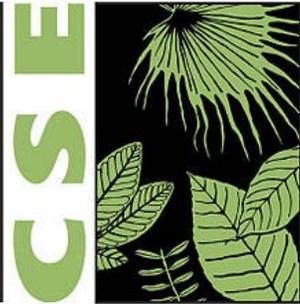
Who will bear the costs?

- Even in the case of really ambitious mitigation, climate change will not stop owing to the fact that CO₂ already in the atmosphere will remain there for hundreds of years
- Developing countries including island states and least developed countries have increasingly argued the need for financing adaptation measures in UNFCCC
- Funding reaching \$100 billion/yr promised at Cancun – no money in the Green Climate Fund so far; Fast track fund of \$30 billion not met
- But there are limits to adaptation as well – who will bear the increasing economic losses arising from climate extremes?



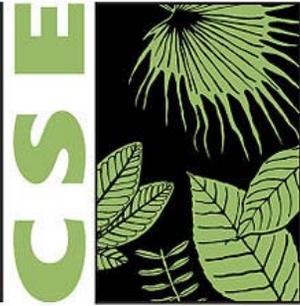
In UNFCCC so far..

- AOSIS was the first to link loss and damage from climate impacts to mitigation commitments
- Developed countries have long dodged the question on a compensation mechanism
- Evolves into an adaptation element – who bears the costs beyond adaptation?
- Cancun (CoP-16) initiates 2-yr work program on loss and damage –progress will be reported at Doha



Cancun-Durban-Doha

- Key themes identified at Durban to be discussed in workshops in 2012
 - Assessment of risks associated with loss and damage
 - What are the range of approaches available to address both extreme events and slow-onset events
 - How can the UNFCCC strengthen the implementation of identified approaches
- Report from workshops in different regions on above themes to be reported at CoP-18 to decide on way forward
- At Doha, developing countries will push for continuing the work program and establishing an international mechanism which will include an insurance pool



Key issues/Areas of contention

- **Non-economic losses:** developing countries want detailed listing of non-economic losses, eg: cultural loss, loss of lives – no consensus here
- **Risk assessment/risk management:** Developed countries want more focus on risk assessment, developing countries want to focus instead on how to manage the risk
- **Extreme/slow onset events:** More knowledge and activities exist on extreme events; many gaps in data on slow-onset events such as sea level rise and glacial melting
- **International mechanism** proposed by developing countries: Opposed by developed countries; cite lack of sufficient knowledge on issues and consider it premature to ink out an international mechanism

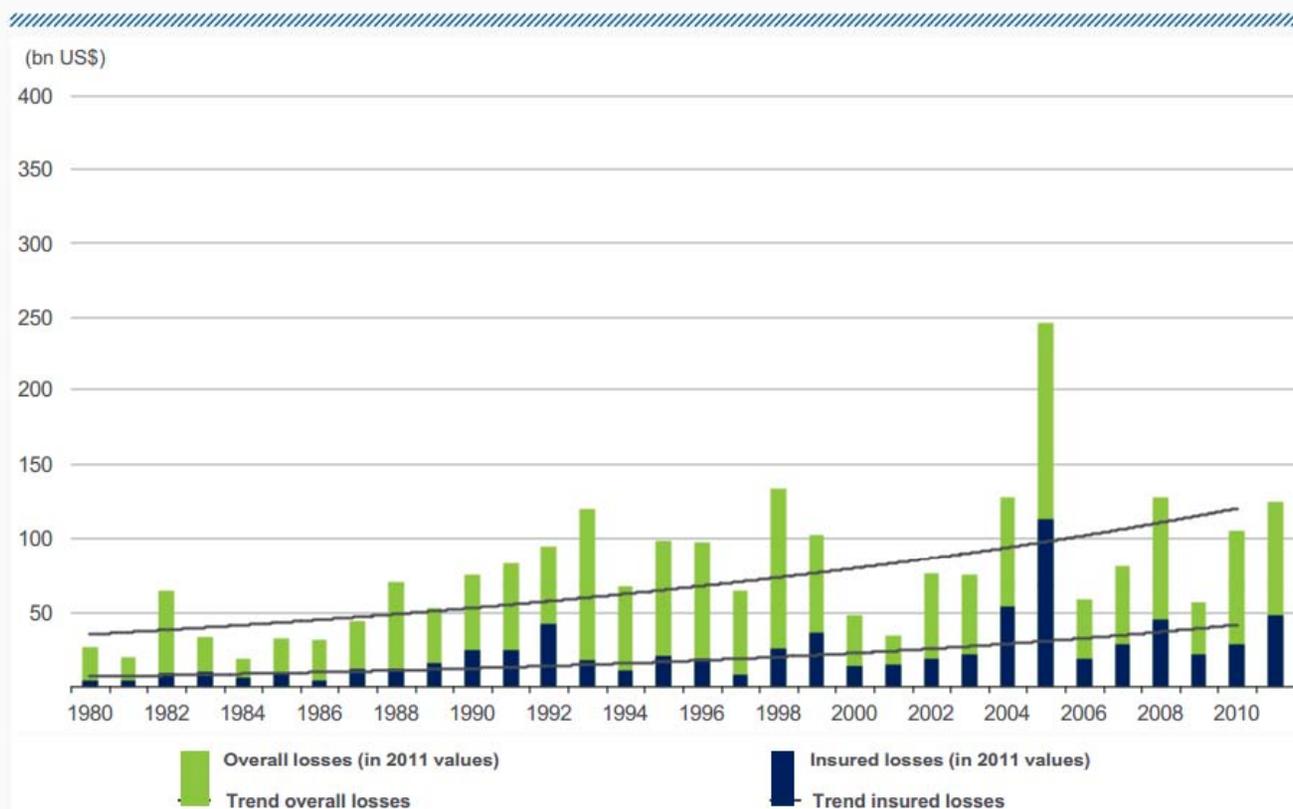


Outside of UNFCCC

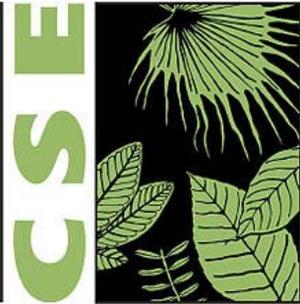
Extreme weather events

Losses from weather catastrophes worldwide 1980–2011 (2011 Jan. to Sept.)

Munich RE



- Reinsurance companies, such as Munich RE have recorded an increase in number of weather-related events and an increasing trend in insured losses
- National and regional climate insurance mechanisms cropping up Eg: **Pakistan National Insurance Mechanism, Caribbean Catastrophe Risk Insurance Facility**



Questions that remain to be answered...

- Loss and damage discussed so far in the context of the most vulnerable countries
- Should funds be set aside towards adaptation and loss and damage, what indicators will be used to decide who receives the fund?
- Small island nations and LDC's most active in the debate so far – where will India figure in the debate?