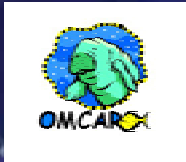


MANGREEN

Mangrove Restoration and Ecology in India

a project by
OMCAR / DEEPWAVE
& Lighthouse Foundation

Dr. Onno Gross
Deepwave e.V. Hamburg



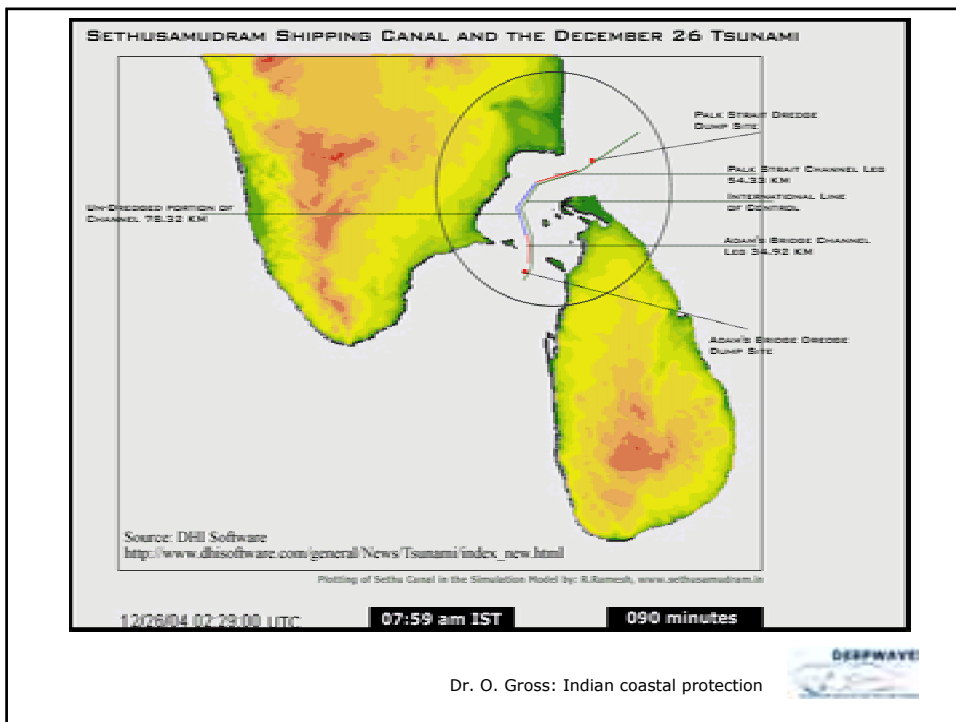
LIGHTHOUSE FOUNDATION



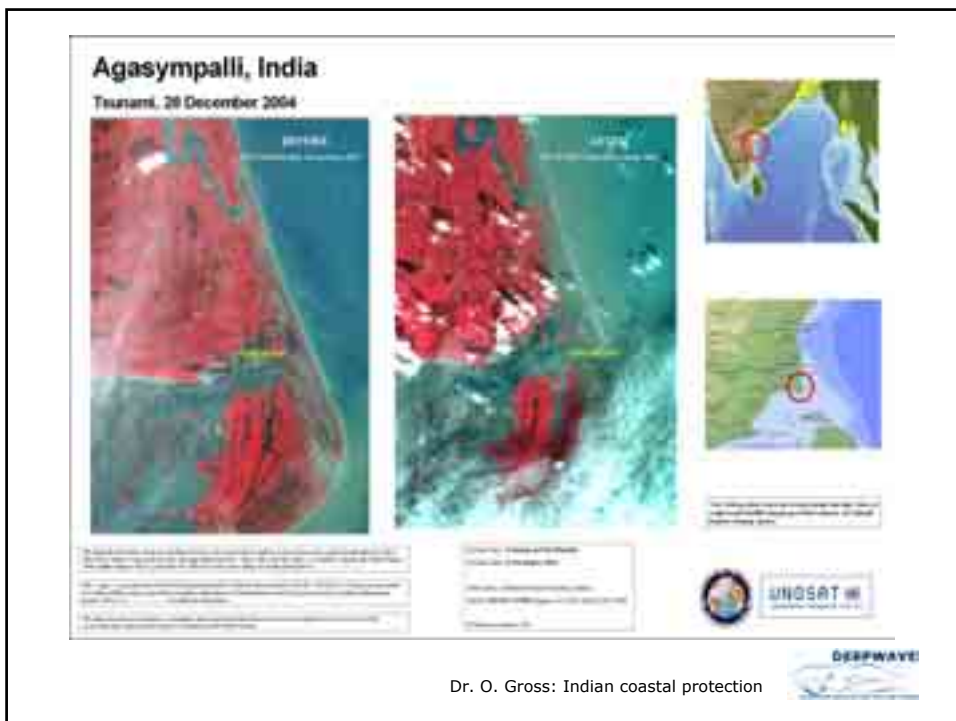
Southern India and the 2004 Tsunami

- huge effects to the East Asian Region
- loss of life and nature



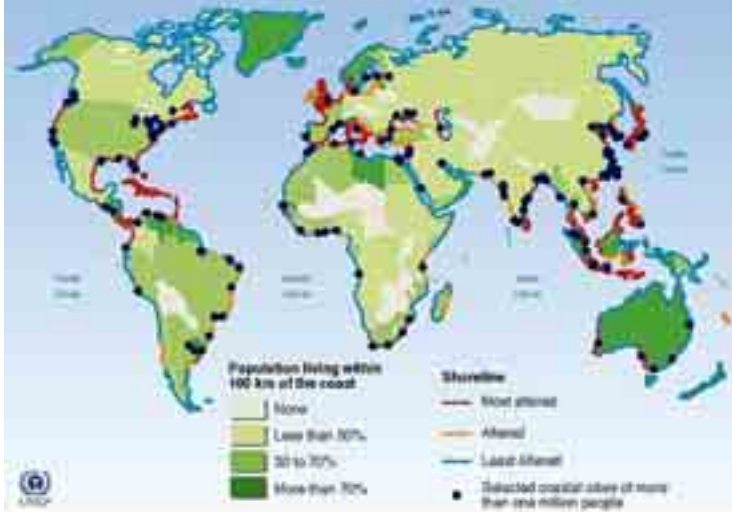


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Coastal Populations and Shoreline Degradation

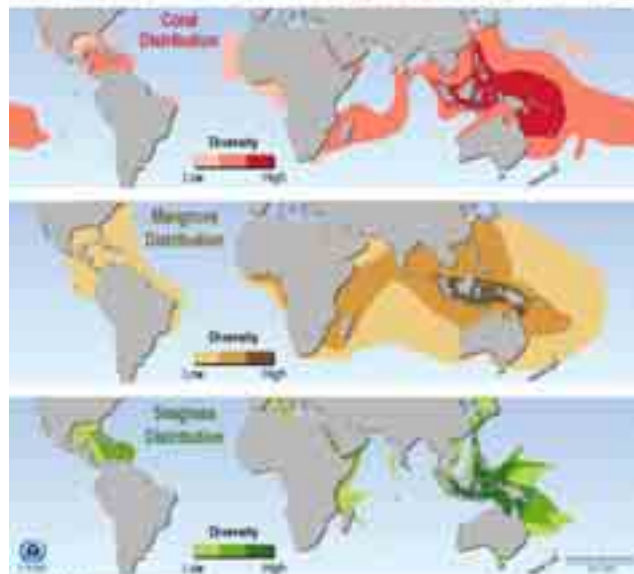


Source: Burke et al., World Resources Institute, Washington DC, 2001; Paul Harmon and Fred Pearce, AAAS Atlas of Population and Environment 2001, American Association for the Advancement of Science, University of California Press, Berkeley

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Global Distribution of Coral, Mangrove and Seagrass Diversity



Source: UNEP-WCMC, 2001

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MANGREEN Project



- started 2005
- mangrove reforestation of 20 ha
- nursery and fencing
- social programmes (schools, tailor, coir, fishermen communities, water, health)
- www.mangreen.org



Dr. O. Gross: Indian coastal protection



Thank you!

DEEPWAVE e.V.
The Initiative for the protection of the
High and Deep Sea
info@deepwave.org
www.deepwave.org



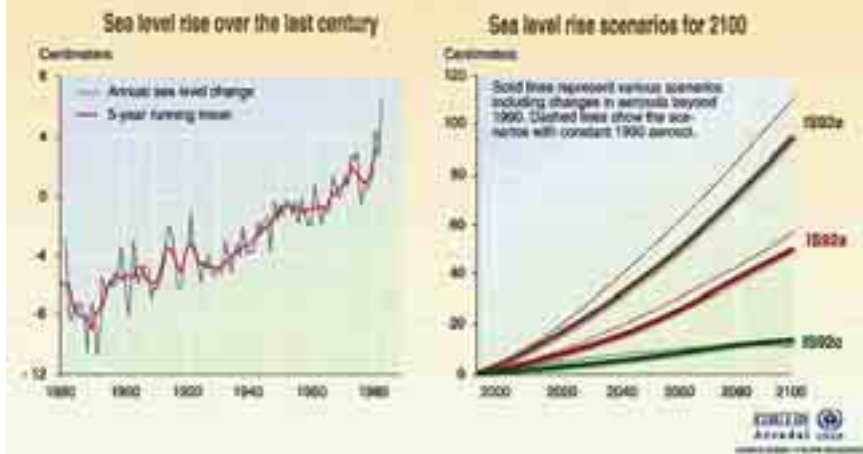
Global warming

Projection of Global Average Temperature to 2100



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Sea level rise due to global warming

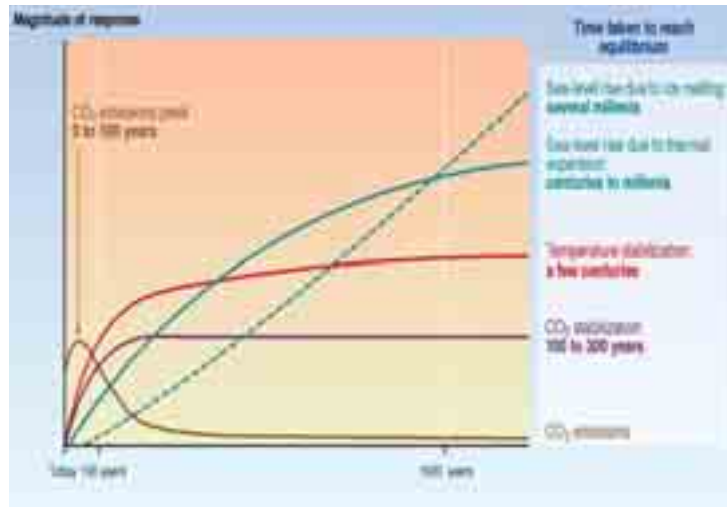


Revised Climate Change 1992. The extent of climate change, contribution of melting glaciers to the overall sea-level rise and to the long-term rise in sea level due to climate change, 1992 and 1993. Copyright: Intergovernmental Panel on Climate Change, 1992. See also the report by the Intergovernmental Panel on Climate Change, 1992.

Predictions IPCC 2007: 9-88 cm (median 48 cm)



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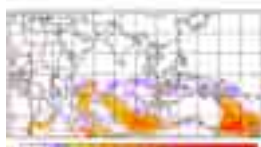
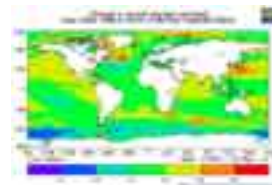
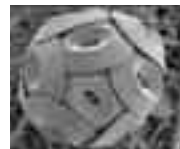
**The sea level will grow even after a stop of CO₂- emissions!
Therefore, we have to adapt to the future consequences now.**

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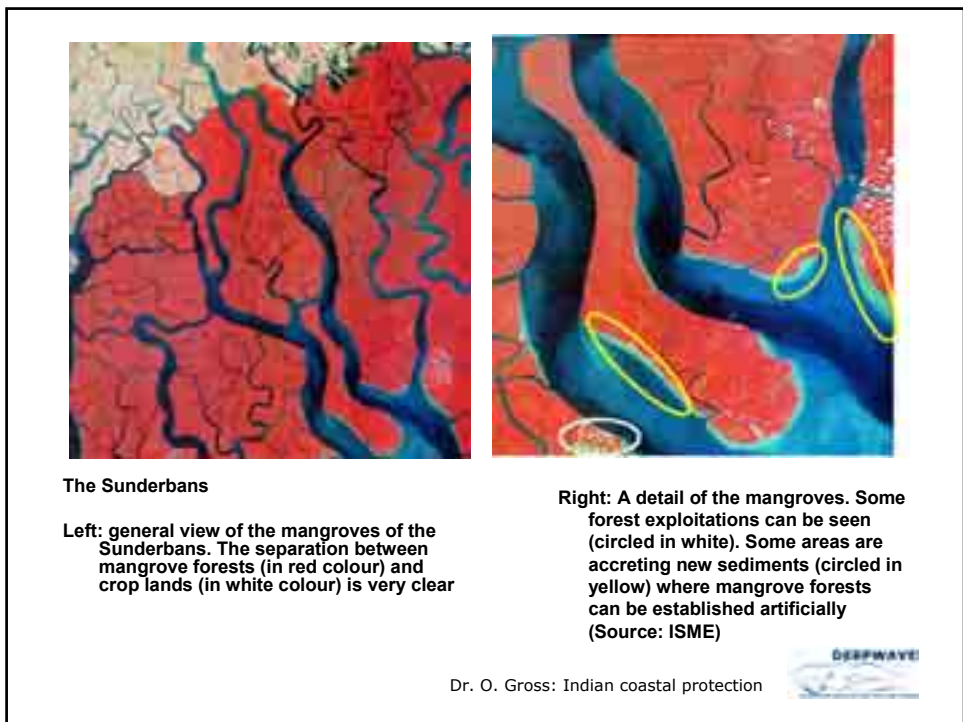
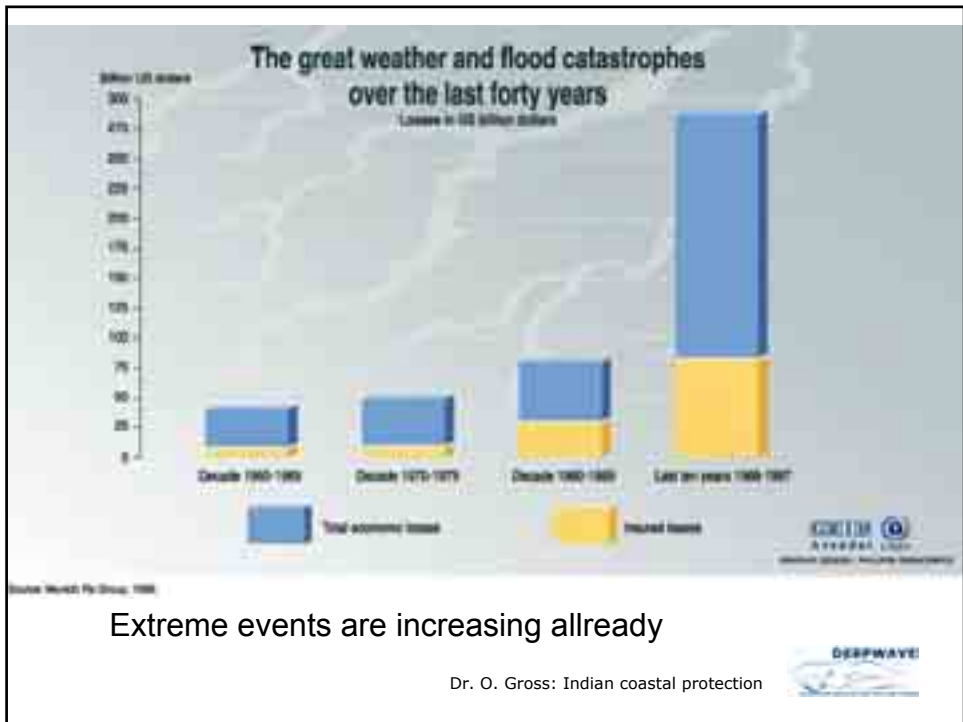
Climate change: effects to the oceans

- Less capacity for uptake of CO₂ in the future.
- Changing of current deepwater currents.
- Thermal extension of the water masses lead to a 15-50 cm higher sea-level.
- Acidification by the uptake of CO₂.
- UV-radiation and temperature increase threaten wildlife.

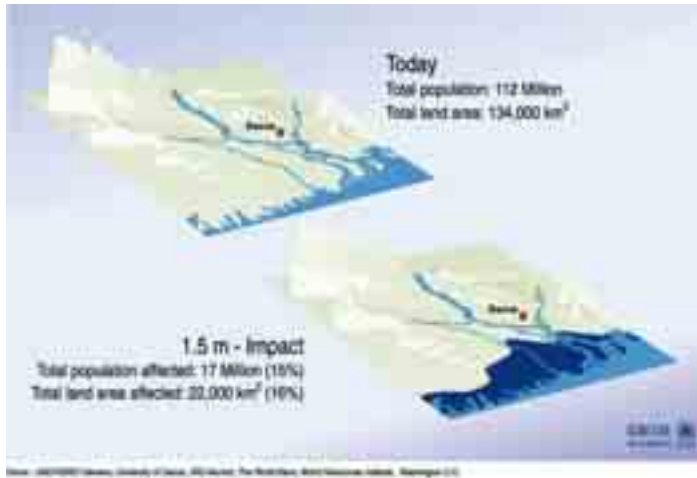


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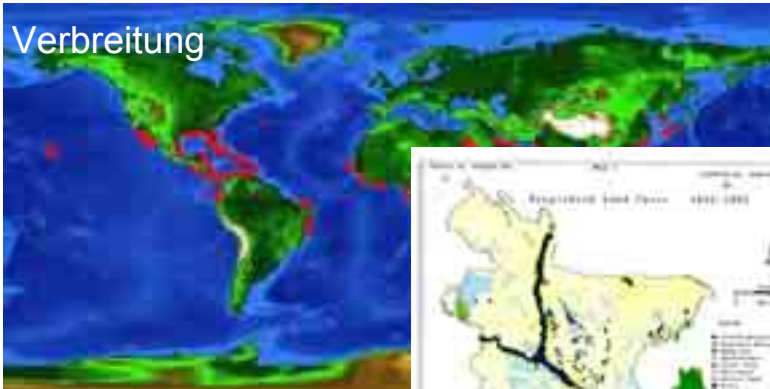
Potenzielle Auswirkungen des Meeresspiegelanstiegs auf Bangladesch



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Verbreitung



40 species of mangroves, which dominate about 75% of the world's tropical coastlines between 25° North and 25° South



D



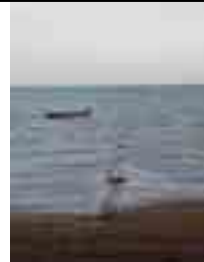
Mangrove planting



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Gefahren für Mangroven: Garnelenzucht



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