

# Deltas at risk

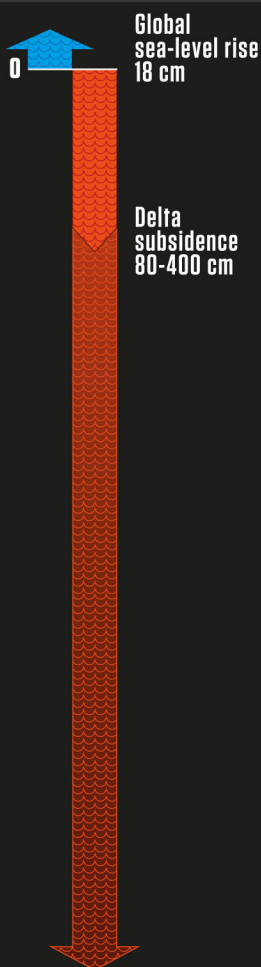
Deltas have long shaped humans' lives: our ancestors thrived in river valleys like the Nile, Indus and Yellow. Their rich topsoil, refreshed every year by floods, fed and sustained our early societies.

Today, the story is reversed: humans are shaping deltas. And some deltas are no longer thriving. Modern humans extract oil and water from delta sediments and the rocks below; they build dams upstream that trap sediments that would have replenished the deltas. These and other human activities have led to compacted soils – and slowly sinking deltas.

## By numbers

- 1%** The amount of Earth's land area occupied by deltas.
- 24** The number of major deltas that are sinking.
- 4m** Between 1974 and 2010 some parts of Jakarta sank over four metres.
- 45-82cm** The likely range of global average sea-level rise possible by 2100 if emissions continue unabated. Sea level will continue to rise beyond 2100.
- 85%** The percentage of major deltas that experienced severe flooding in the last decade.
- >500 million** The number of people who live on deltas.

### Sea-level rise vs. delta subsidence (20th century change)



### Delta risk map

#### SUBSTANTIAL RISK

Sediment deposition rates less than sea-level rise

- 1 Paraná, Argentina
- 2 Vistula, Poland
- 3 Indus, Pakistan
- 4 Brahmani, India
- 5 Mahanadi, India
- 6 Godavari, India

#### GREATER RISK

Ground compaction exacerbating low sediment deposition rates

- 7 Mississippi, United States of America
- 8 Magdalena, Colombia
- 9 Niger, Nigeria
- 10 Tigris, Iraq
- 11 Ganges-Brahmaputra, Bangladesh
- 12 Irrawaddy, Myanmar
- 13 Mekong, Vietnam

#### SEVERE RISK

Virtually no sediment deposition and accelerating compaction

- 14 Colorado, Mexico
- 15 São Francisco, Brazil
- 16 Rhône, France
- 17 Po, Italy
- 18 Nile, Egypt
- 19 Krishna, India
- 20 Yellow, China
- 21 Yangtze, China
- 22 Pearl, China
- 23 Chao Phraya, Thailand
- 24 Tone, Japan

ELEVATION (metres)



#### SOURCES

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