

The need for a River Delta convention in 10 slides

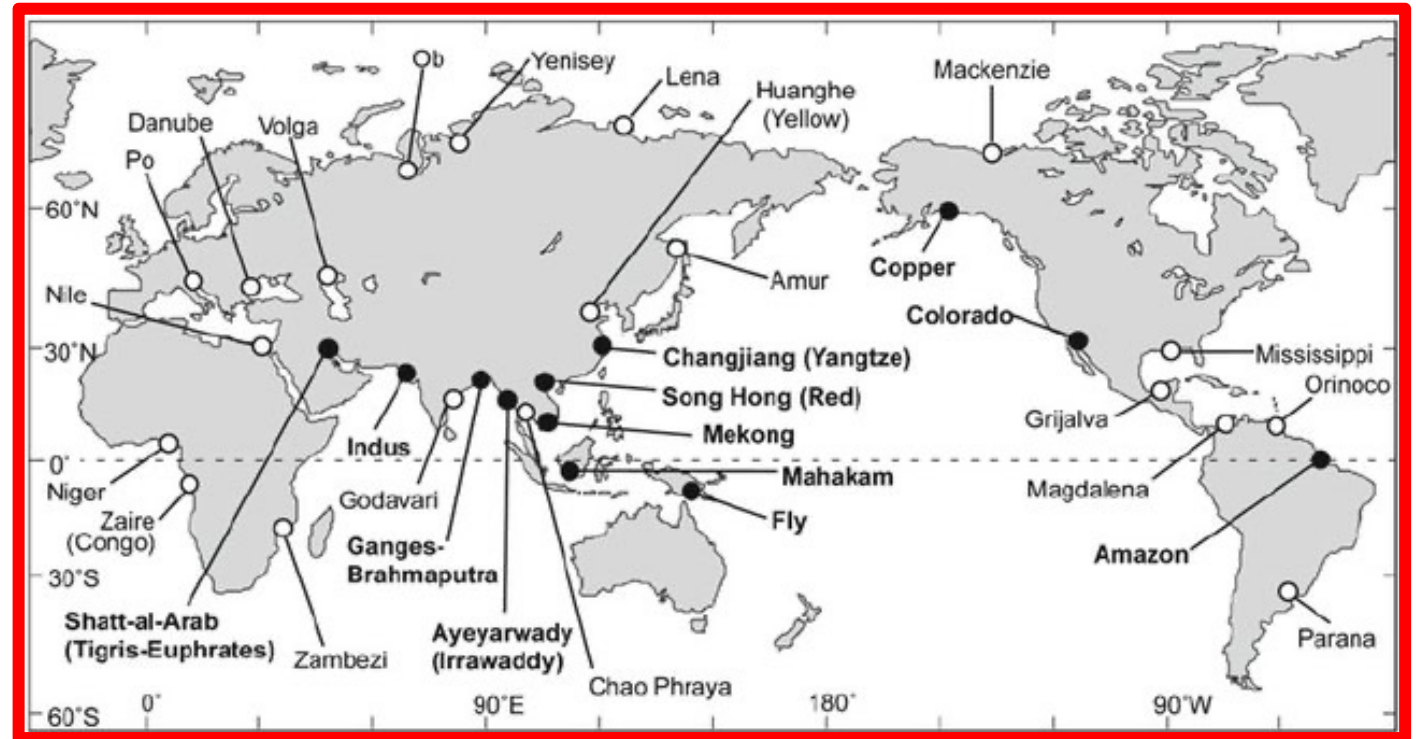
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COP 28
UNCCRD

A UN Convention on Conserving River Deltas
Dubai, UAE

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Map of the world's major river delta systems, with those forming tide-dominated deltas indicated (bold type; filled circle). (Modified after Hori and Saito 2007)

A COP 15 Voice from Youth and Young Professionals

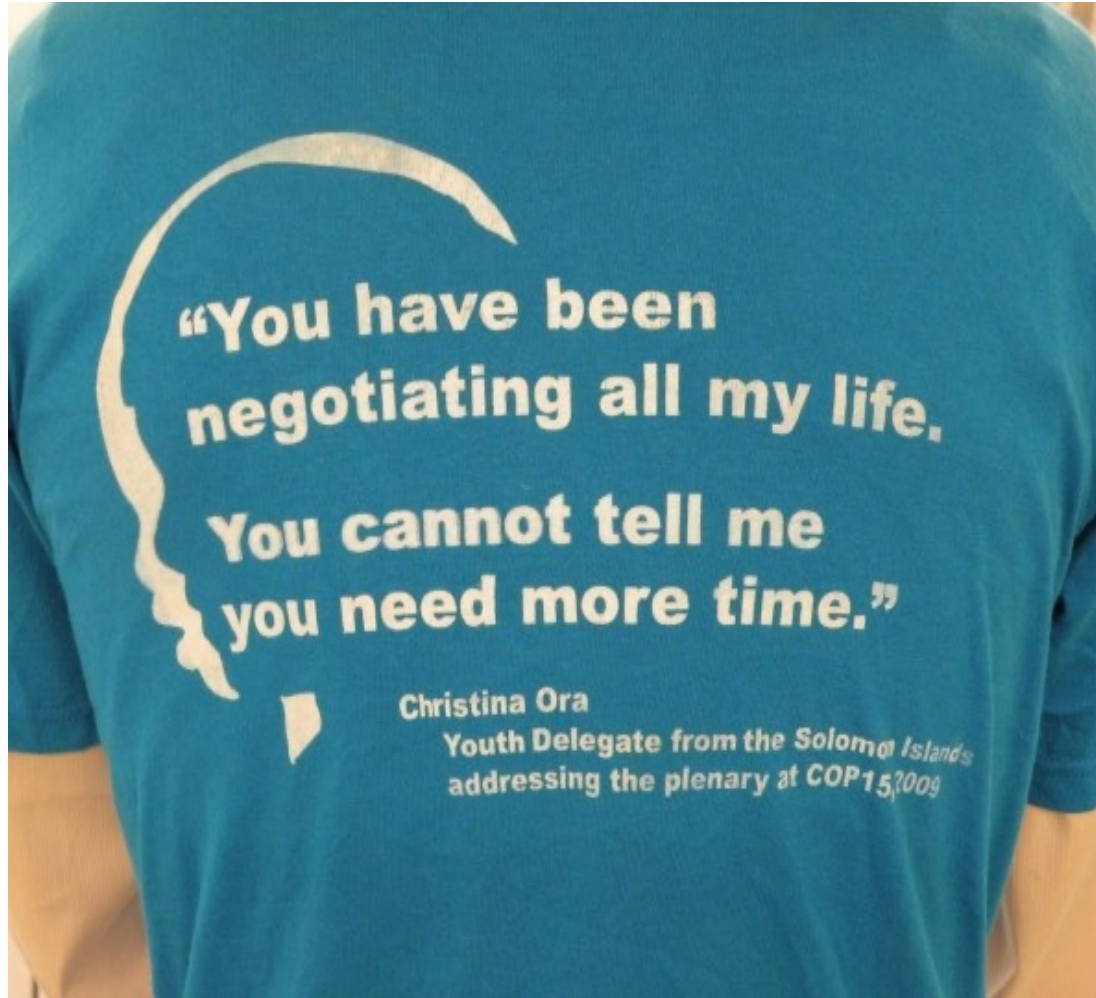


Photo taken of a young person’s t-shirt at COP 15, Cancun, Mexico. Mickey Glantz.

Kicking the climate change “tin can” down the road is no longer be a just option.

Today’s leaders are passing on an existential human-induced warming of climate and warming are rising of oceans to our children and grandchildren to suffer from, cope with, and pay for.

Looking Back to look ahead: Why Focus on River Deltas?

1. Deltas are home to over half a billion people (occupy only 1% of the world's land)
2. They are home to biodiverse and rich ecosystems, such as mangroves, reed lands, and marshes
3. They are economic hotspots, food baskets for many nations, supporting much of the world's fisheries, forest products, and extensive agriculture
4. They are ports of entry supporting significant growing cities and harbors

YET ... they are disappearing at an alarming rate

1. Human actions from upstream deplete them from water and sediment : on a global scale >40% of river discharge and 26% of sediment are being intercepted by large reservoirs
2. Local resource exploitation and exploration contributes to subsidence, loss of wetlands, and accelerated erosion
3. Climate-change-induced Sea Level Rise increases salinity and accelerates land loss
4. Tropical storms and cyclones cause devastating flooding worsened by mangrove destruction

This Slide was made by
Dr. Efi Foufoula-Georgiou
July 24, 2013,

**On behalf of an
international team of delta-
related science collaborators**

**A decade ago they called for
“Delta Decadal Initiative: A
framework for actionable
research towards delta
sustainability”**

**At the Deltas Symposium
In Gothenburg, Sweden**

Some goods & services provided by a river delta's natural environment

Biodiversity

River deltas are often home to a diverse array of species, including fish, birds, amphibians, and plants.

Fisheries

Delta provides habitat and breeding grounds for numerous fish species, including commercially valuable ones. The fisheries support local livelihoods and contribute to regional food security.

Mangroves

delta's vegetation, including **mangroves**, acts as a natural filter, trapping sediments and pollutants from runoff

Storm Protection

Coastal vegetation like **mangroves**, seagrasses, and salt marshes help protect coastal communities from storm surges, erosion, and other extreme weather events by acting as natural buffers.

Delta Soils

are suitable for agriculture. It supports the cultivation of crops such as rice, yams, cassava, and oil palm. These agricultural activities are a significant source of income and food for local communities.

Medicinal Properties

found in delta ecosystems that can be important for traditional and modern medicine. Local communities rely on these resources for traditional medicine practices.

Carbon Sequestration

Mangrove forests, which are prevalent in the Niger River delta, are highly effective at capturing and storing carbon.

Transportation and Trade

The delta's waterways serve as important transportation routes for goods and people. This facilitates trade and economic activities within the region.

Cultural and Spiritual Significance

associated with traditional practices, ceremonies, and beliefs, and local folklore.

Regulation of Nutrient Cycles

Deltas regulate nutrient cycles., helping to maintain a balance in the surrounding ecosystems.

Slow motion Changes in river deltas: future disasters in the making

- **Flooding in river basins** (from highlands to lowlands to oceans)
- **Storms and tropical cyclones increase** in frequency and intensity
- **Sea level rise and saltwater intrusion** (saltwater intrusion into freshwater sources)
- **Erosion and land subsidence** reduced sediment supply from upstream, groundwater extraction or natural compaction)
- **Highland drought and water scarcity** drought and water scarcity, reduced waterflow and afforestation
- **Landslides** increase the risk
- **Loss of agricultural land**
- **Displacement of communities** (people are forced to relocate, setting the stage for social and cultural disruptions in the hinterlands)



HOTSPOTS Pyramid

For many deltas the Future has already arrived

Thanks To Dr. Syvitski, a delta expert, “Deltas UNite” has been gathering the support of the scientific community

The Mega-Delta Program of the UN Ocean Science Decade today sent its support for “Deltas Unite”



MEGA-DELTA

Deltas associated with large rivers: Seeking solutions to the problem of sustainability

Scientists from around the world support “Deltas UNite”

A glimpse of the Future?? A Maldives Ministerial meeting ... under the ocean!

**Desperate times call for desperate measures:
Drawing attention to the plight of low-lying coastal areas to the threat of sea level rise.**



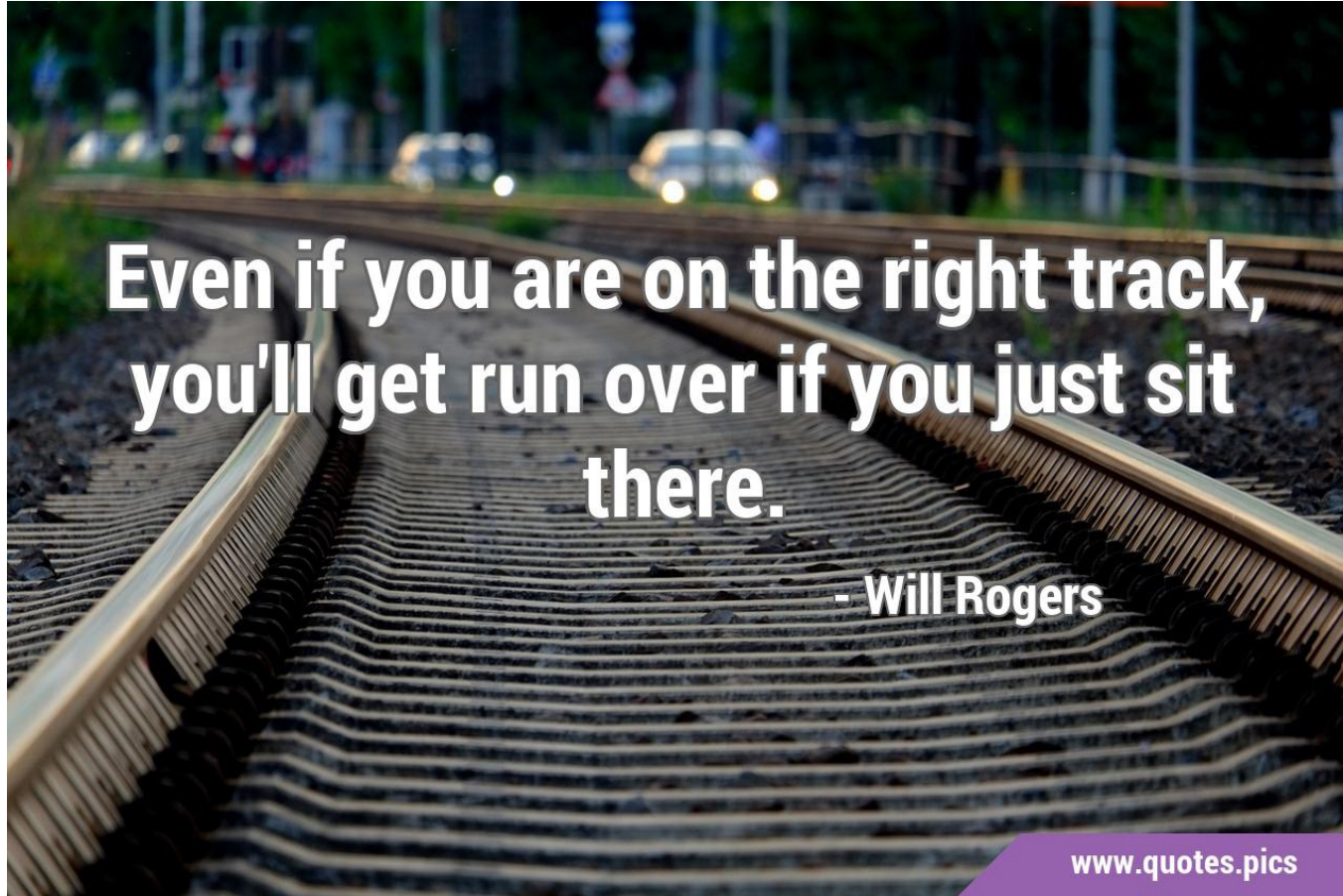
A key reminder of the Future

The Millennial Ecosystem Assessment (2005) highlighted “ecosystem goods and services for human well-being”

However, natural ecosystems do not need us. We need them. So, we must highlight “human goods and services are needed for ecosystem well-being”

It is time for Deltas of the World to UNite!

- **Analogous “sparks”**
 - **Desertification-prone countries (UN Convention to Combat Desertification, UNCCD)**
 - **Small island states, experiencing sea level rise and threats to sustainability and existence (**AOSIS (Alliance of Small Island States)**).**
- **The same applies to delta states.**
- **If delta states join together, their collective voice will be heard.**



**The climate change future is arriving
earlier than expected.**

***The 2020s are the new 2050s!**

What could be worse?

**** The 2050s are likely to see what is
expected in 2100!**