

# SALINITY: A SOCIAL- ECOLOGICAL ISSUE IN BENGAL DELTA

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Salinization "is the accumulation of salts in soil and water." It adversely affects 500 million people, particularly in low-lying river deltas such as Bengal delta. The process of salinization emerges from natural (e.g., tidal inundation) to anthropogenic (e.g., excessive groundwater abstraction) causes and can irreversibly contaminate rivers, aquifers and soils. In Bengal Delta, multiple drivers arise at different scales and include agricultural practices, upstream water diversion, and relative sea level rise and can be amplified through feedback from inappropriate adaptation strategies.

## Impact of Salinity



Decreasing rice production in the coastal areas

Water and Food Security

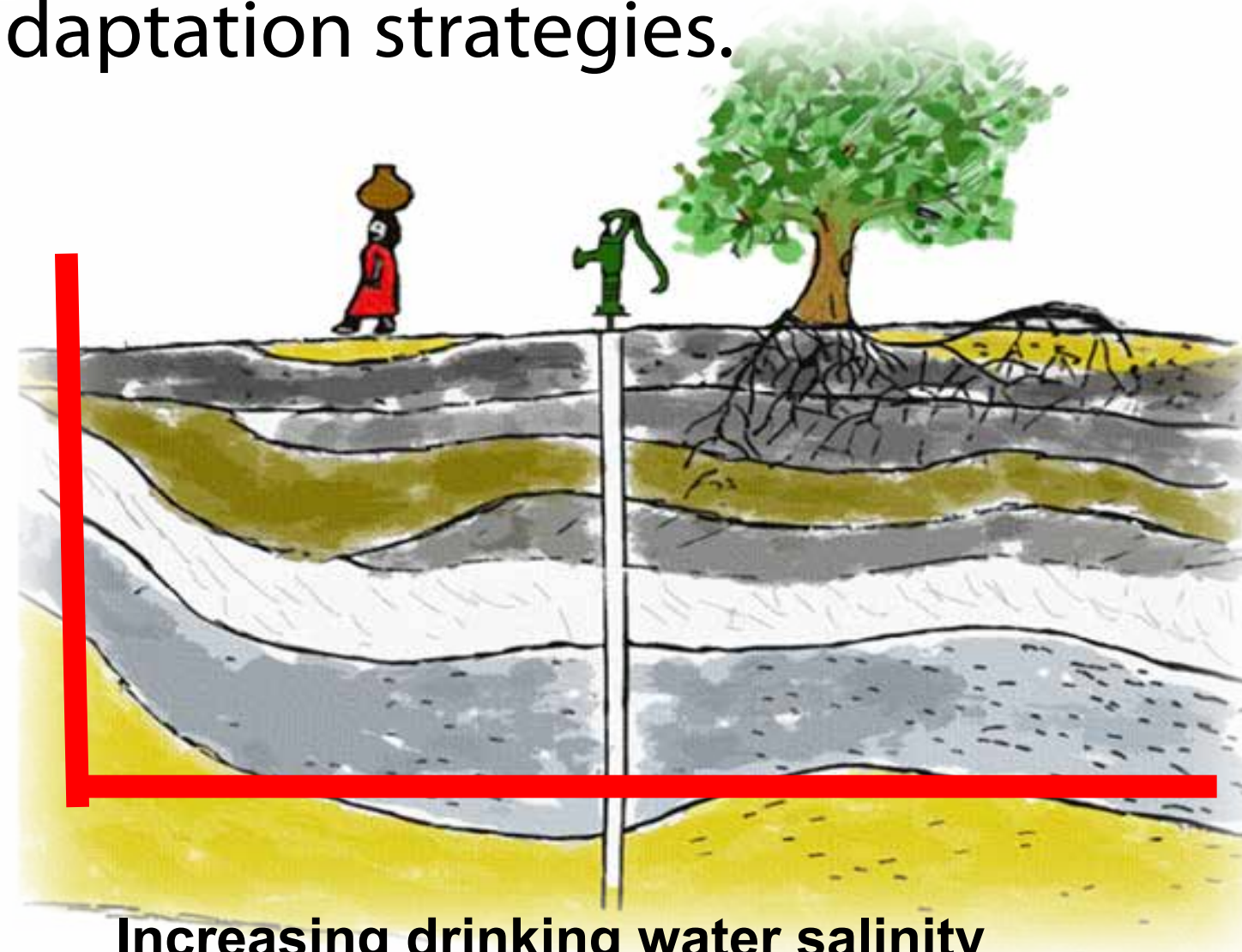
Health

Livelihood

Agriculture

Ecosystem Services

Conflict and Migration



Increasing drinking water salinity

Rice production decreased by **15-31%** in a salinity-affected coastal area over a period of about 15 years.

Population forced to migrate Internally and internationally

Transition from rice to brackish- water shrimp & Aquaculture



Increasing number of Shrimp firm

~50% of the coastal population developed hypertension or Pre-hypertension associated with rising salinity in the last decades, which is higher than national average.



Degrading freshwater ecosystems

### Reference:

Rahman, M. M., et al. "Salinization in large river deltas: Drivers, impacts and socio-hydrological feedbacks." *Water Security* 6 (2019): 100024.



Population forced to drink low quality saline water.

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## SALINITY FUTURE CONFERENCE

10-13 september 2019 | Leeuwarden, the Netherlands