Asia Water Forum 2022
8–11 August 2022 • Online

Focus Area: Climate change and water-related risks

Session Title: Understanding, managing and communicating risks

Schedule: 9 August 2022 (Tue), 3:00 p.m. - 4:30 p.m. (GMT+08)

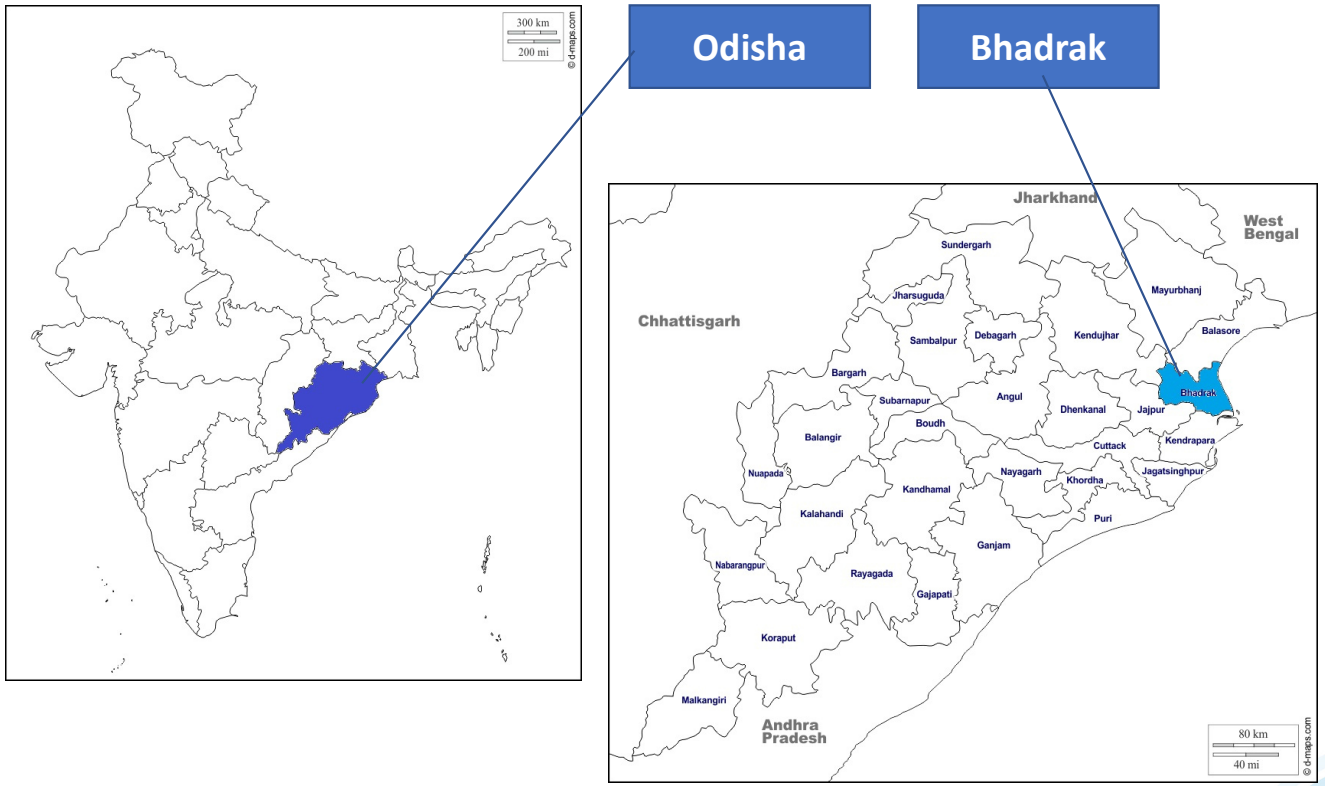
Resilient community - adaptive life and livelihood!

ADB

The geography

- Bhadrak is one of the coastal districts of Odisha (India) – infamous for frequent occurrence of disasters like flood, cyclone and drought.

- Considering proximity with sea and frequent occurrence of disaster like flood, sea water is surging towards mainstream – making more and more surface water bodies saline – also posing threat to sweet water aquaculture (fishery is one of the prime livelihoods).



Impact on livelihood

- Many agricultural fields (agriculture is a prime livelihood of people in the district) are also getting affected by salinity.

- Due to loss of livelihood, people are getting migrated.

Impact on drinking water

- Over couple of decades, extraction of ground water has been substantially increased – both for drinking and domestic purposes as well as for irrigation purposes.
- Over extraction of ground water has further increased saline contamination in ground water.
- There is hardly any step towards rain water harvesting and ground water recharging – in contrary, traditional surface water bodies are in decay due to increasing need of land proximate with population growth. Those water bodies were able to meet the water requirement for domestic purposes.
- Current water supply system (for drinking and domestic purposes) is tilted towards ground water-based supply system.

Posing threats

- Small and marginalised farmers dependant on agriculture are losing livelihood and migration is increasing.
- Considering increase in salinity, especially the agricultural fields, saline water aquaculture (prawn) is increasing in the region.
- This is attracting rich people to get into saline water aquaculture – since this is a profitable business.
- Rich people are in the process of grabbing the agricultural land of small and marginalised land holders – pushing them to further poverty.

Posing threats

- For saline water aquaculture, the lands are being converted to water bodies – killing all possibility of bringing those land back to agricultural land.
- All stated events – both natural and man made are creating threat to ground water and more and more drinking water sources (primarily based on ground water) are getting contaminated by salinity – creating water starved community.
- This is disturbing the equilibrium of power dynamics, access to resource and economics within the geography – making rich richer and poor poorer.
- Increasing migration is also leading to loss of education of children and other social, economical and health related threats.

How to break the nexus

- Resilient drinking water system will ensure that community is not deprived of drinking water.
- Developing proper drainage line as well as rehabilitating the community level buffer zones will help in absorbing flood water (including saline water flooding), which will eliminate the threat of saline water flooding in the agricultural field.
- Certain level of land development, especially embarkment around agricultural lands will also help in eliminating threat of saline water flooding in agricultural fields.

How to break the nexus

- Creating farm ponds and ensuring water availability for agriculture instead of depending on existing irrigation system will also help in maintaining the fertility of agricultural land (will eliminate threat of saline water flooding through established irrigation channels)
- Promoting rain water harvesting at scale will ensure fresh water availability at the community as well as reduce the load on ground water, further not contaminating the same through salinity.
- Creating cooperative among small and marginal farmers, so that they can also get into saline water aquaculture, especially in the lands those are already converted for the purpose.
- This will also help in breaking the power dynamics based on resource availability among the community and will also reduce migration and related consequences.