Technology Fact Sheet for Adaptation

Technology Fact Sheet: Rehabilitation of existing embankments/ dykes and dredging [i]

Sector	**Water/ Infrastructure development**
Technology Name	Rehabilitation of existing embankments/ dykes and dredging
Adaptation Benefits	The proposed embankment rehabilitation will allow no or less seepage during flood and high tide and will provide protection against cyclonic and tidal surge. Further the rehabilitated embankment will require no or less annual maintenance. Adaptation benefits like increased safety of people's life and crops including provision of emergency shelter on the berm at C/S can be achieved against cyclone and tidal surge.
Background/ Notes, Short description of the technology option	All the coastal embankments and sea dykes were constructed under Coastal Embankment Project (CEP) in the early 60's and 70's. Due to prolonged use and weather effects, the cross-sections of the existing embankments including the crest level have been reduced significantly. In addition, sea-level rise due to global warming effect these embankments and dykes are under serious threats to breach. **Solution:** Rehabilitation of existing embankments/dykes with medium and long term traditional and indigenous method
Implementation assumptions, how this technology will be implemented and diffused across the subsector	• Redesign of crest level of embankments/dykes incorporating Sea Level Rise (SLR), subsidence and storm surge and providing adequate berm at the C/S. • Construction of a narrow embankment (ring Bund) at existing height of embankment apart from the main embankment and filling the gap in between by dredged earth to provide berm.
Impact Statements-How this option impacts the country development priority	
Country social development priorities	• Increased safety of people's life and crops against cyclone and tidal surge. • Provision of emergency shelter on the berm during cyclonic/ tidal surge.
Country economic development priorities	• Will reduce import cost of cereal crops • Will reduce loss and damages from the disaster events

Country environmental development priorities	• No or less seepage during flood and high tide. • Protection against cyclonic and tidal surge • No or less requirement of annual maintenance
Costs	
Capital costs	Approximate cost of Earthwork (E/W) construction for the new embankment would be Tk 50 lakh per kilometer. (USD 62500)
Operational and Maintenance costs	Tk 02 lakh per kilometer per year. (USD 2500)

[i] **This fact sheet has been extracted from TNA Report – Technology Needs Assessment and Technology Action Plans For Climate Change Adaptation– Bangladesh. You can access the complete report from the TNA project website http://tech-action.org/**