

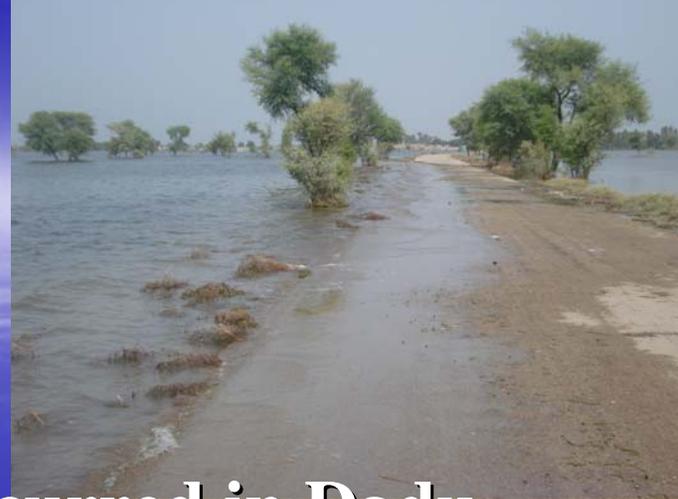
# **Institutional Development and Disaster Mitigation - Lessons Learnt**

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# Background



- In July- August 2007, rain floods occurred in Dadu and Qambar-Sahdadkot districts in Sindh, Pakistan.
- The British government when conquered Sindh in 1843, it experienced this disaster recurrently.
- It provided flood protection (FP) bund (protection embankment) along the border between Sindh and Balochistan to regulate the flood water safely

## Background Cont...

- Minimizing the flood damages through main Nara Valley drain, disposing water in the Manchar lake and finally in the river Indus.
- Though the FP Bund's height was raised but it was not sufficient to stop the flood water overtopping it.



BALUCHISTAN

Sindh

Flood  
Protection  
Bund

Settlement Area

BREACH AT RD 82±

110+000  
BREACH AT RD 109±

100+000  
Drain  
80+000

BREACHES DUE TO HIGH  
WATER LEVEL IN DRAIN  
(40± 42± & 43±)

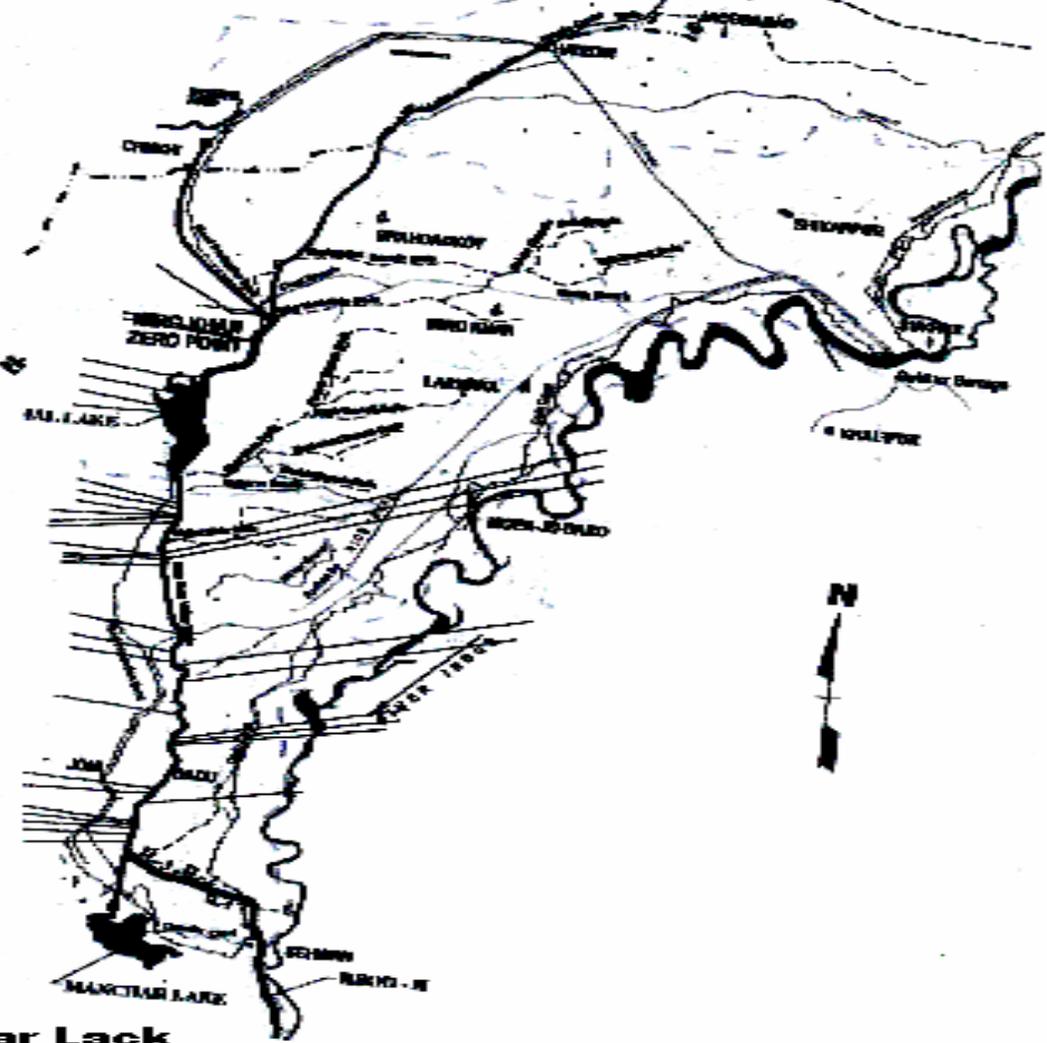
Flood  
Protection  
Bund

Valley  
40+000  
Nora  
30+000

Main  
20+000  
INDIAN LAKE

0+000

S A N D H



Manchar Lack

# Flood Damages



<b>Losses</b>	<b>Qamber-Shahdadkot</b>	<b>Dadu</b>
<b>Villages affected</b>	<b>1,226</b>	<b>237</b>
<b>Area affected (hectares)</b>	<b>152,804</b>	<b>115,134</b>
<b>Cropped area affected (hectares)</b>	<b>19,323</b>	<b>26,607</b>
<b>Displaced persons</b>	<b>132,394</b>	<b>11,788</b>
<b>Population affected</b>	<b>137,544</b>	<b>253,644</b>
<b>Houses damaged</b>	<b>19,584</b>	<b>11,344</b>
<b>Livestock perished</b>	<b>40,136</b>	<b>41</b>

Source: Relief Department, Government of Sindh, Hyderabad, 28 July 2008

# Findings

- After the British government left Sindh in 1947, no serious effort was made to study the climate changes and increasing flow of the rain water from the Kirthar Mountains
- Even the FP bund could not withstood the pressure of the flood water.
- That brought destruction of villages, displacement of people, ruining of their livelihoods, since the standing rice crop was wiped out.



## **Findings Cont..**

- **Relief goods though were adequately supplied but due to mismanagement, these were ineffectively distributed**
- **The concerned government organizations failed to face the mega disaster**
- **One could not see the TV footages of the affected people taking shelter in open spaces and waiting for food, water, clothes and shelter.**

## Findings Cont..

- Like mismanaged relief distribution, rehabilitation also suffered due to weak government institutions.
- The people ultimately depended on their sources to survive.

## Findings Cont...

- **The damages could have been decreased if the scientific planning had been done through institutional framework.**
- **Whenever heavy rains occur on Balochistan side, the rain water descends from the Kirthar mountains in Balochistan to the adjoining districts of Sindh, Jacobabad, Qamabar-Shahdadkot and Dadu districts**



## Findings Cont..

### **Institutional failures:**

- **No research on climate change and its impact on the disaster areas**
- **Lack of planning to manage the flood water disposing to the river Indus**
- **In case of breaches in the FP bund, poor planning to use technology to plug the breaches**
- **No awareness and training to people to be engaged in disaster management**

## Findings Cont..

- **Lack of survey of locations to settle the people displaced by the flood**
- **No arrangement to move the animals to safe place with availability of fodder**
- **No plan to save the standing crops**
- **Lack of community mobilization to construct the houses at the safe level preventing from flood**



## Findings Cont..

- **Inadequate flood studies to estimate the level of flood water and raising the FP bund**
- **Poor planning for relief and rehabilitation of the flood affected people**
- **Lack of master plan for sustainable disaster management in the affected area**



# Recommendations

- **Kirthar disaster mitigation authority should be established for sustainable disaster management**
- **Planning is needed to dispose flood water safely through the drain and Manchar lake to the Indus river**
- **Information technology should be used for disaster relief and recovery**
- **FP bund be raised further to obstruct the flood water**

## **Recommendations Cont..**



- **Training should be imparted to the communities on the disaster mitigation**
- **The people should be motivated to construct their villages on a higher level**
- **Resettlement plan should be made for rehabilitation of the displaced people**

## Recommendations Cont..

- All stakeholders should be involved including donor agencies, NGOs, community organizations, and universities, in the sustainable disaster mitigation action plan
- Relief and rehabilitation operations should be undertaken with scientific planning and gender needs should be given special attention.





**Thanks**